### ENRON LESSON: TECH IS FOR SUPPORT

Fall fuels auestions about for-profit IT BY MELISSA BOLOMON

Even great ideas bave their

Following the debut of Fnron Corp.'s Web-based power and gas trading platform, revenue at the Houston-based energy company jumped from \$40.1 billion in 1999 to \$100.8 billion the following year But after striking gold by

combining its energy industry | core missions experience with a world-class trading system, Enron kent diegine into new markets, convinced that its IT infrastructure had the Midas touch. In 2000, Enron suffered a \$60 mil-

sight of their organizations' Is it time to go back to the days when IT supported the business rather than became the business?

ness. It struggled in more than a dozen unfamiliar industries

Questionable partnerships. overagenessive investments and

shady accounting practices top a long list of factors in Enron's

downfall. But as they look for

lessons from history's biggest

bankruptcy, executives in all industries are questioning

whether they like Enron, spent

so much time turning IT into a

profit center that they lost

and crashed within a year.

"I think (Enron's ankruptcyl is going to have a very Enron, page 61

### SNMP DEVICES OPEN TO ATTACKS

Security flaws threaten key network protocol

BY JAHKUMAR YIJAYAH The security of Simple Network Management Protocol services was thrown into doubt last week by a warning that hundreds of hardware and software products with built-in support for SNMP are vulnerable to attack. Security analysts had blunt

advice for IT managers: Fix your SNMP-based installations immediately if you need them and can get patches from vendors, or else shut down the network-monitoring services.

The flaws exist in products from numerous vendors and can be exploited by malicious hackers to launch denial-ofservice attacks or gain unauthorized access to systems, according to an advisory from SNMP, page 16

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KNOWLEDGE CENTER: CRM





tionship management, the irrational exuberance of the past few years - full of vendor

hype and massive IT projects - is giving way to smaller projects with quick returns on investment. Many early CRM projects failed, but companies are learning how to get

it right on the second or third try. Special Report begins on page 27.

FEMILIARY IS, 2002 - VOL. 36 - NO. 8 - SE-COPY

wat The right





#### BrightStor™ Enterprise Backup

What good is storage software if it isn't fast arough to book up all of your critical information? Bright/Sic Enterprise Bookup sets on new standard for high-speed strongs software, which means you don't have to pick and choose when date to protect. So if you're boding for the best strongs solution for UNIX, Windows NT, and Windows 2000, you set found it.



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### NEWS

6 CIOs receive new guidelines for sharine cybercrime information with the federal povernment.

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7 Corporations find that spam can he as costly as it is annoving. 8 Developers seem inclined to rewrite their apps rather than migrate them to Microsoft's new Visual Studio .Net environment.

10 Microsoft lists top executives Bill Gates and Steve Ballmer as potential witnesses in the remedy phase of its antitrust case.

11 A California city onts for a wireless LAN over cellular for its critical communications networks.

14 it may be time to pull the plug on unprofitable online sales operations, some retail managers say.

**OPINIONS** Patricia Keefe Pimm Fox Dan Gillmor Letters

Frank Haves How to Contact CW Company Index Shark Tank

feature at:

#### Keen E-Commerce in Mind

Companies that are increasing their security spending should take the opportunity to boost security - and buyer confidence - in their e-commerce operations, writes Computerworld's Rick Saig in our Security Community. www.compyterworld.com/security

Start-un Consolidates Security OpenNetwork Technologies gives Web users single sign-on to applications across the enterprise. See this week's Emerging Companies

rworld.com/g?27109

### KNOWLEDGE CENTER:



27 Sober CRM

Tr projects — is giving way to smaller, tactical projects with quick ROL 28 The Story So Far CRM may be a relatively new

30 Try, Try Again CRM projects fall more often than they succeed, analysts say, But some compa nics have sotten CRM to work well, albeit on the

ness nave gotten CRM to work west, albeit on the second — or third — try.

OBLEST: One CIO offers advice on making CRM work, based on his own rollout experience of the past year, www.computerwork.com/e726763

32 Kevin Fogarty says CRM systems are too high-concept to work in tough times. But small, tactical im-provements will eventually give you the name benefit

34 Picking Winners & Looses CRM systems are mabiling more sophisticated customer expaneization out pitfalls abound, including alientating customers appropriate pitches and ignoring others who here turrent low returns but high potential. MLBE: There's a good chance you're spending too



much on unprofitable customers while ignoring your best ones. IT can help you get it right.

36 ROt: Insights Turn Into Profits Bookseller WH Smith uses a CRM system to track customers' buying patterns and tailor 1,200 stores for greater returns.

40 Q&A: Schweis Sone CRM Payoff Despite a down-turn in the investment market, financial services firm Charles Schwab is continuing to invest in its CRM stra egy and giving customers a more integrated, personal-ized experience.

42 Field Report: CRM Analytics Integration difficu-ties abound, but the payback of using CRM analytics

mis are looking to latch

The rapid emergence of new laws in the U.S. and globally is ing companies to consider other privacy is more than a legal apliance issue but also a busi-

Micholas Patroloy learned the rd way that CRM and security wild be inseparable.

WWW.COMPUTERWORLD.COM

### NEWS

### McData Sues Rival Over Storage Patent

Broomfield, Colo.-based McDate Corn. filed a bressit in U.S. District Court in Danwer charging that Brois infrincing on a catest related to age networking switches, Mcto claimed that at least two fire de products use its patented technology for measuring data trail for floor, Son Jose based Brocade said the suit is sufficient mort

#### ASP Rearlies New **CRM Applications**

vice provider (ASP) Sale com inc. this week plans to announce a set of customer rela ship management (CRM) and vare is de tee, Calif. Pricing starts at \$125

### Comcast Fixes Glitch In E-Mail Server

rp. said it restored e-mail service 300,000 years after a do go canned by a nerver gitter last week. Philadelphia ns and said it would stop cola use the internet. The coresaid it will purpe the data it

#### Sun Looks to Take BM's Server Users

on a porter of pricing and nigration programs almod at bring arver users away from ESM. The ore fellows comments by Sun CEO saly late hast year in which he said that the two Unix rivels are

### ATDEADUNE Cybercrime Reporting Procedure Draws Fire

Some experts worry that guidelines may require CIOs to reveal too much to feds

BY DAN VERTO OFFICE CALL AND THE Secret Service last week announced support for a controversial set of standard procedures that businesses can use to report serious hacking incidents and other Internet-related crimes. A panel of federal and pri vate-sector security experts. including Howard Schmidt. the newly appointed vice chairman of the president's

Critical Infrastructure Protection Board, helped draft "The CIO Cyberthreat Response & Reporting Guidelines," The effort was cosponsored by CIO Magazine, a sister publication

of Computerworld The guidelines instruct CIOs to report only major incidents that result in damage to property or loss of significant revenne or that indicate a noteworthy trend or new type of attack. According to the guidelines, companies shouldn't "report routine probes, port scans or other common events," because law enforcement simply

doesn't have the resources to investigate those incidents. Some experts wondered if the reports IT groups file will be as useful as closing the gate after the horse has already left the barn. "Will they be able to stop or recognize malicious acts before damage is done, or before we fill out these forms?" asked Steven Sommer CIO at Hughes Hubbard & Reed LLP.

a law firm in New York Probably not, said Keith Morgan, chief of information security at Terradon Communications Group LLC, a Nitro, WVa-based content management company. "If you want really useful information, log and track the scans," said Mor-

gan. "The scans tell you what systems are actively searching the not for vulnerable hosts The information that may be of the most value is exactly what

they're asking you not to send." There's also concern that the level of reporting and informa-

tion-sharing necessary will remain clusive as lone as the government continues to ignore industry's need to protect proprietary data from potential exposure under the Freedom of Information Act (EOIA)

is, What will they do with the

said John Pescatore, an analyst at Gartner Inc. in Stamford Conn. "The information on the form is a backer's and [news] reporter's dream. We still have no definition about Freedom of Information requests. Will this information be exempt from FOLA? Antitrust? It seems like a very unnecessary effort until all of this is defined." Sommer said he has similar concerns shout the use of information provided to the sovernment, "The real question

this information will be handled. I would advise enterprises to avoid this like the placue."

> information?" he asked "We are not interested in highlighting the vulnerabilities of a company's system," said lames Mackin, a spokesman for the Secret Service, "Underreporting of these crimes is unfortunately the norm, and we are trying to take steps to improve in that area."

### SafeWeb Users Vulnerable

Attacks could expose identities of political dissidents. CIA users

BY DAN YERTON SafeWeb Inc., a developer of online privacy technology used by consumers, political dissidents and ecvernment seemcies, including the CIA, last week said there are security gaps in its software that could put the identities of users

ne rick

The flaws, discovered by David Martin, a computer science professor at Boston University, and Andrew Schulman. a researcher at the Privacy Foundation in Denver stem from the way the SafeWeb software handles InvaScript and its use of master cookies, which store cookie information from multiple sites. Using a series of attacks, the researchers showed how they were able to trick a Web beowser into divulging a

user's IP address and cookie in-

formation, and they siso in-

stalled apyware for the duration of the Safe Web session. We have found that the SafeWeb service is seriously and fundamentally flawed," said Schulman, "We're not talking about a few implementation errors or imperfections. Our paper documents spectacular

failures of the service, based on extremely simple attacks." Computerscorld's investigation into Schulman and Martin's study ignited a series of e-mail exchanges between the researchers and executives at

### What's Wrong

a Although PrivaSec Intel deletes master cookies, users are safe only if cookies are deutsied in the broader m JesuScript volnerabilities se rware to be inserted, capturing all Web addresses wedled by a uper

Emeroville, Calif-based Safe-Web and prompted the compony to issue a public press release Feb. 13 in which it acknowledged the security flaws Safe Web was aware of the problems as early as last year. said co-founder and CEO

Stephen Hsu, but the company decided not to develop natches after abandoning its consumer business and licensing its techpology to Los Appeles-based PrivaSec LLC in August. In a statement, PrivaSec CEO

Geoffrey Riess acknowledged that "there are certain vulnerabilities to SafeWeb and Surf-Secure secure surfing technology" and added that the compamy is working to develop patches. However, PrivaSec claims that the "likelihood of such an attack on a user living in a free, non-politically-repressed society is relatively low."

Martin characterized Priva-Sec's explanation as security through obscurity, "Frankly, I can't think of any other security system that is considered secare by nature of it being unlikely to be attacked," he said. SafeWeb is used by thou sands of politically oppressed people around the world to hield their Web activities.

### NFWS

### Spam Taking a Toll on Business Systems

spam that moves through his

crippled his busi-

ness, Kramer said.

Brightmail Inc.

a San Francisco-

based developer of

spam- and virus-

blocking software.

measures spam at-

tacks - blasts of

unsolicited e-mail

messages to many

addresses from a

single source. Ac-

conding to its re-

search, such at-

spam messages it blocks per

Some IT managers are battling spammers, but others say the fight is too expensive

jacked. His domain has be-Raymond Huff doesn't do come a favorite for spammers to spoof in the "to" and "from" much to block spam from infields and the sheet volume of vading server and e-mail in-

CONTROL CONTROL

my Internet Services

boxes at his company. Trans Pacific Stores Ltd. He doesn't servers as a result has pearly MORE ONLINE But he's paying a fairly high price for Antispam that luxury. Huff is Products keeping Trans Pacific's e-mail addresses under wraps.

thereby limiting notential customes contact 'We don't get that much snam comine into our system be-

cause we don't give out our e-mail addresses" to anyone other than i tacks increased from 148,100 in January 2000 to 2.8 million last business associates, said Huff, month, HiWasy Internet Service president of the Lakewood, Colo.-based provider of vices in Huntsville, Ala., meanwhile, puts the number of spacks and sundries to office buildings. In fact, the company avoids publishing e-mail contact information on the Internet, and employees are encourseed not to release their e-mail

addresses And it's all because of spam, Huff said. The recent proliferation of unsolicited commercial bulk e-mail commonly known as soom has end users and network and messaging administrators scrambling for ways to be rid of the bogus, lewd and annoying electronic messages that can flood user mailboxes

and cripple networks. Beyond the technology issues, companies are concerned about messages that are inappropriate, if not down-right offensive, in a business

"We don't want the lewd pictures - my wife doesn't need a penis enlargement, and I don't need breast implants," said Bob Kramer, owner of CIS In-

ternet Services, a small Internet service provider in Clinton lows. Kramer's problem is that his company has been hi-

ninute at about 150, which counter to 78.8 million per year. That suree has moved some companies to take drestic action. For Todd Meagher, cofounder of Credit.com Inc., the potential loss of legitimate business correspondence inherent in blocking spam is an acceptable price to pay to keep

his network spam-free. Credit.com is a credit informotion and services company in Alameda, Calif., that has also been the victim of domain spoofing. Meagher uses a com-bination of filtering devices and blocks at the router to keen sowanted traffic out. Un-

fortunately, it also keeps some legitimate messages out. "The trouble is almost all filters today work using simple keyword-matching approaches, when what's needed is something with more natural language interpretation intelli-

pence," said David Ferris, president of Ferris Research Inc. in San Francisco. "Otherwise, any reasonable attempt at defining

much too much in that you don't want in, or stopping bona fide messages." "That's the price you pay," Meacher noted "There's no clean solution vet."

As unsophisticated as existing tools are, people will pay for them, Ferris said. "One reason people will pay

dens, take opt-out links and of

eders, false opi-out links and o devices. These rescopes are electrone, unwelcome and armo g." said FTC Chairmen Twothy urs. "Me went it oil the Met." But Ray Everati-Charch, cour rithe Coalition Against Unsalic

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th of investigation and greats urose and a little into of a six

for antispam services is be-cause of the false positives. You'll be charging through. deleting a whole load of spam. and in the rush you'll inadver tently delete important things that superficially look like snam but aren't," be said.

"Another reason is tha more users will have restricrions on their mailbox sizes for the foreseeable future." Ferris said "A flood of snow can cause the message store space to run out, in which case new bone fide incoming e-mail will

be refused." Using existing tools, as crude as they may be, is the only solution now because snammers

aren't easy to identify "The biggest problem abo am is that the people who do it lie." Kramer said. They hide

behind false addresses, relamessages through "open relay e-mail servers, many of which are located offshore, and senreally make it difficult to find a person or organization th could be held accountable.

### filters ends up either letting Antispam Legal Burden Rests With Affected Corporations

one day leaf month, a sparamer be gan using a Microsoft Exchange server at Arrow Products Inc. in send bulk e-mail to Yahoo, Hotma end other accounts. It's possible that the sparemer had sort several thousand e-mails through the net-work by the time the IT department cut off the server's forwarding ca-publity, said IT meraper Richard

eston wasn't happy. The taking legal action crossed us mind he said hat he devie it because of the cost and time it

"It's enough to just get our nor-mal work done and start down something like that," said Eggle-ston, whose Elshom, Wis.-based inuses. There is just so much you

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ion last week said 4 was

ration," said Water J nin, an IT attorney at Manum on spert - one that will go for deceptive e-real claims and

Businessee may have no choice at to get involved, in the case of a en, for instance, it's po

### Users Weigh Microsoft **Development Options**

Some firms lean toward rewriting, not migrating, applications with new tool

IGRATION tools are available to belp developers port their existing speliearions to the new Visual Spodio Net environment that Microsoft Corp. launched here last week But some corporate developers said they don't in-

Several developers attending Microsoft's VSI ive conference here said they plan to rewrite their applications eather than port them to the new environment, which they change for Visual Basic users. who will have to adapt to the ---- tool's object-oriented programming model. Some said or any of Visual Studio Net's

they will leave their existing applications running in the old Visual Studio & environment

and use Visual Studio .Net only for new applications "The stuff that's out there already works well," said Sam Cooper, a senior programmer or Suferon an insurance firm in Redmond, Wash, noting that he sees no reason to migrate

existing applications. Frank Gillett, an analyst at Cambridge, Mass-based Forrester Research Inc., said one of the most compelling reasome for a user to switch to the Net environment is to enable Microsoft applications to communicate with non-Microsoft annlications via XML-based Web services. But if they have no need for that functionality

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Medix Inc., a provider of online ap-

plications to connect physician of-lices and hospitals with health care

ser at Boston-based Nav-

new features, they should I tions to Microsoft's . Net tools leave their existing applications alone he said Gillett does however rec-

ommend that cornerate users reconsider their commitment to Microsoft's development environment, since the new tool represents such a major step for Visual Basic users. "The effort required to [switch to .Net] is similar to the effort required to switch to lava " Gillett said. "So if you're point to make the effort to sten up to full distributed computing and object-oriented programming, stop and reconsider, 'Should I switch to lava?' "

Examining the Alternatives

Keith Covington, director of Internet technology at Game-Ston Inc. a Granevine Texasbased retail chain with more than L000 stores, said his company will decide within the next month whether is will

move its Visual Basic applica-Microsoft's Common Language point, Grandel said he can't see a

company letting its developers work on the same code base in di lenent lance props. "Maintainability of components becomes a lot more difficult," Gradel said "Il somebode left, you would have less flessbilty. And if I needed to take a pro-

grammer to help out on another project. I might be hindered if they don't know the language of the oth er project

Murphy said he thinks many forms will run moved environments. developing applications with both Microsoft and Jave tools. He foresaws, Visual Studio Net being used to build clients, department-level applications and internet-based ap plications, with Java as the choice for business frameworks and comconects that need to run on differ

ent operating systems.

or switch to lava.

Covington poted that Games Stop is a Microsoft-centric shop and has people with Micount skills in house But it must weigh the pros and cons of trying Microsoft's new tool. which is "not as muture as some other options" and would mean change for the firm's developers, he said. "They're going from a procedural, functional-based programming model to object-oriented, and that's not an easy leap to make," Covington said.

"Do you het the business on applications you're deploying on the .Net framework with a developer base who is new at this technology? Microsoft group product manager John Montgomery

claimed that some early adopters moving from Visual Savic to Visual Basic Net have told his company that it's "oot the major change people think it is." He said the new tool is \*hailding on 10 years of experience that we have bringing customers up to speed."

Lilya Epstein, a systems developer at Montgomery Watson Harza Inc., a Pasadena. Calif-based waste-water map agement company, said her personal preference is to stick with Visual Ratic rather than switch to another programming language

But Epstein said she will try to migrate applications before rewriting them in order to preserve the time and effort she put into building objects in Microsoft's Component Object Model. "When you work for six, seven years, you've got a lot to lose," she said. In contrast, Steve Sommer, CIO at Hughes Hubbard & Reed LLP, a New York law firm

with 1,100 employees, said be HISSI SHITTE plans to have his developers gradually shift the financial, coment management, mail.

database and Web applications from Visual Basic to CR. "The way it compiles is much quickor hacture it's notice to Net and to me, that's where the future lies for programming within .Net," he said. Sommer estimated the price toe for the move at \$3 million

to \$4 million, not including hardware. But he said he thinks it will be faster and less expensive to start from scratch rather than convert the Visual Basic applications to Cit. a process he doesn't believe produces "solid code."

Daniel Appleman, president of Campbell, Calif.-based Desaware Inc., which makes addon components and tools for Visual Studio, advised conference attendees not to port their code unless there's a good economic justification. "A lot of people will be doing Visual Basic 6 code for some time," he said. "Just training costs will be substantial We

are at the start of a big and lone

transition. This transition is comparable to the transition from 16-bit to 32-bit Windows. Net's a big deal, but big deals don't happen overnight." 9

For instance, users might want to move a Web application to Visual Studio Met to gain the benefits of

Analysts Suggest Slow .Net Migration

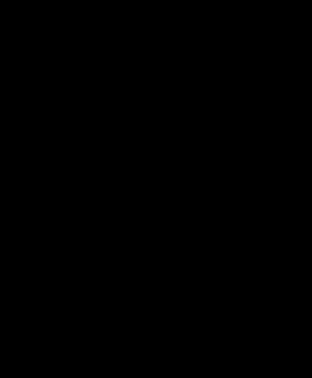
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partners, said he doesn't see "any hing real compelling" to make his On a personal level, Grindel said he's interested in Vitual Studio Net's ability to let developers work in more than 20 languages when they run the applications through



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Acronoli'a Common Language

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ived and Stiding Shehes le Management Shelves Fass.

Stabilization Kits Power Distribution Links

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 Available in multiple configurations 35.5"-does 42"-does, being or black NetSheiter\* Open Frame Recks
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 Delivered to approximate networking devices such as bubs, routers and switches Industry standard 7-bigh design provides 45U of equipment mounting space . Self-squaring design allows one-person assembly



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### MasterSwitch" Series

. Made of high-strength 6061-T6, structural-grade aluminum note power distribution for notwork of . Users can configure the sequence in which power is provided to individual receptacles upon start-up

. Built-in Ethernet interface for direct connection to LAN . Individually control 8 on-board power outlets for conclete and flexible management of attached equipment.

nive naturals/PC sy

### **KVM Switches**

NVIVI DWITCHOS

Server switches designed to increese system availability and mor

4 and 8-port models available expandable to support up to 64 servers Models evaleble that support Sun, USB and PC servers simultaneously · Built-in scanning feature allows you to automatically monitor your inputers without intervent

. On Screen Display (OSD) functionality, advanced security features ProtectNet\*



### . Protects against surges and electrostatic discharge traveling through data lines

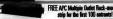
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### **NFWS**

#### Microsoft Warns of Six Holes in Rowser

coeff Corp. released a software th that's designed to fix six renecovered security holes in its met Explorer (IE) Web brown The most serious vulnerability co et attachers run mallriren code co scied systems, said Microsoft, which ensisted a "critical" ority rating to that flow. The aich should also plug all other

#### **Bell Profit Rises** Despite Sales Drop

eter ended Feb. 1, up 5% from the year-earlier total of \$434 mil-less. But fourth-courier revenue de cloud 7% year over year to \$8.1 bilpredicted that naise will fall by an much as 6% during the company's first quarter. Even so, Dell said he

#### IP Numbers Beat Original Expectations

its first quarter ended Jan. 31 to-\$11.4 billion, as business dropped 8% from \$12.4 billion in the same ed last year. The results we Brut-quarter level, partly due to

plus an apprais of the software that recess with the systems, . . . Ex-THERT OF THE CITY OF NEW

### Gates May Take the Stand in Antitrust Case

Microsoft considers calling chairman. Ballmer to defend it during remedy phase

BY PATRICK THIBODEAU

By nutting its top executives on the noteotial witness list for the namedy phase of its antismoot house with nine states and the District of Columbia. Microsoft Corp. is on a risky vet necessary eath, legal ex-

Last week, the company and the states submitted separate lists naming a total of 50 possible witnesses. Microsoft's list included Chairman Bill Gater and CFO Steve Ballmer

Will Evans CIO at Peoples Energy Corp., a Chicago-based utility, said Gates and Ballmer should testify. The two executives "are responsible." Evans said. "They run the company, They are the people on deck let them come in and testify" But Evans added that he seen the antitrust case as a waste of money and believes the proerament should let the market

take care of competition. "What henefit is the consumer going to have? I don't think there is any benefit. They just changed their (enterprise) licensing fees and stuck it to us. The direct opposite has happroped," said Evans, "Get over

#### it. They are in charge." Franctive Street

The nine states placed the officials of all Microsoft's mafor competitors on their witness list for the remedy phase. which is due to begin March II. For its part, the company may being to the stand executives from more than a dozen yendoes and users, as well as its own top leadership.

Gates didn't testify in the triat but the government played videotaped portions of his deposition, taken out of court over three days with government attorneys. It showed the Microsoft chairman behaving

defensively and evasively and conceding little to the attorners. Legal experts uniformly

namned his performance.

Microsoft, however, may have realized that it needs Gates to testify now, said Hilland Steeling on antitrust Invoice at Gordon & Glickson LLC in Chicago. \*Bill Gates remains the heart and soul of Microsoft," Sterling said. "This case goes to the

---- of Minnesoft's business conduct Microsoft simply meds Cates to maintain its credibility and explain its business conduct If Gates testifies, it will

be during the remedy phase sought by the nine states that have refused to accept the proposed settlement agreed to by nine other states and the U.S. Department of lustice (DOI) in November, The dissenting states - California.

Connecticut Florida Kansas lowa, Massachusetts, Min-

remedies than are called for to the DOI deal. The holdouts' proposals include a requirement that Microsoft create & thin-client version of Windows, stripped of most of its applications, as well as the porting of Office to other operating systems, such as Linux. While there is a risk that Gates won't fare well under

ginia and the District of Co-

humbia - are seeking tougher

cross-examination, Andy Gavil, an antitrust professor at Howard University School of Law in Washington, said it's less of a rick than Microsoft would have faced in the initial trial The upcoming phase is "going to be focusing on remedial questions, so there is less of a dancer that [Gates] will be

embarrassed by inconsistent e-mails," said Gavil. In allowing many witnesses and many days of testimony perhaps a month or more -U.S. District Court Judge

from \$2.7 billion to \$4.2 billion.

That 64% increase would bring

total IT security spending to

RIVA of the federal govern

ment's proposed \$52 billion IT

Referring to the percentage

of IT spending that the pro-

represents, Clarke said, "If that

could be said of other institu-

tions, particularly companies

in the private sector we

wouldn't have this problem

The average share of private-

sector IT spending that goes to

security is in the range of 3% to

5%, said Chris Christiansen, an

analyst at Framingham, Mass.-

"If people doubled their

based research firm IDC.

posed security expendi

hudget for pert year

[with security]."

Colleen Kollar-Kotelly may be tude to the critics, he said.

signaling unhappiness with the proposed settlement, said John Kwoka, a economics professor or Noutheastern Heisenrite In Boston. On the other hand, the may feel that the settlement is adequate but wants to give lati-

ways," he said. "Would it solve the problem? No."

Christiansen said more comprebensive solutions are needed Even Clarke arknowledged that IT systems have a long way to un notine that most critical menufacturing, utility and financial operations depend on systems that "were never designed with security in mind." Clarke who heads the White House's Office of Cyberde-

fennes, also warned that al Queda and other terrorist organizations have examined cyberattack possibilities. He said evidence found in caves in anistan shows that al-Oacds "was using the Internet to do at least recommissance of American utilities and American facilities."

Clarke said al-Oseda was athering useful information "If you put all the unclessified information together. sometimes it adds up to some-

### Terrorists Look for Info on Web. Says Fed Cyberchief

White House wants 64% boost in federal IT security spending

BY PATRICK THISODEAU While promotine the Bush

administration's plan to boost the government's IT security spending, Richard Clarke, the nation's cybersecurity chief. warned Congress that terrorist groups are surfing the Web for information about how to target attacks against U.S. corpo-

rate facilities.

Clarke also told the U.S. Senate Judiciary Committee last week that security approaches at government agencies would soon change

The White House wants to spending, it would go a long

from public Web sites. thing that ought to be classi-

# Calif. City Plans Wireless LAN For Critical Communications

Glendale's choice based on lower cost. higher throughput than cellular data

LENDALE, CALIF. has decided to use wireless I AN technology to nmvide high-speed data service to its police, fire and public works departments after determining that cellular mobile data services cost too much and deliver too little. Scott Harmon, assistant divector of information services for the city, which is located in the foothills of the San Bernadino Mountains porthwest of Los Angeles, said the Cellular Digital Packet Data (CDPD) services available from cellular carriers provide 19.2K bit/sec. throughput at best. That isn't enough to support high-bandwidth applications. such as the transmission of

mue shots to patrol cars. "It's definitely a bandwidth issue with us." Harmon said. adding that in his opinion, CDPD didn't provide the throughput needed to support other handwidth-hungry apelications, such as a prographic information system used by

the public works department. Harmon decided to try to leverage the high throughput of wireless LAN technology to a citywide system. Roy Dube, a ultant at New York-based PwC Consulting, called the spproach "truly intriguing" and a sign that wireless LANs are starting to make inroads in markets that cellular carriers. which offer wide-area service.

viewed as their own. The monthly fees for CDPD service also turned him off. Harmoo said. He declined to provide specific costs for the wireless LAN system, but Craig Mathias, an analyst at Farpoint Group in Ashland, Mass, called wireless LAN costs "insignificant" compared

with CDPD monthly charges, Mathias said Glendale could pay about \$2,500 per access point or a total of \$75,000 for 30 sites, compared with monthly CDPD airtime charges that run \$30 to \$50 per mooth for each of the 200 units the city initially intends to deploy on

the system. Harmon tapped PAI Systems Inc. in San Clemente, Calif., to help build a network that will blanker 89% of Glendale's land were the other 19% is uninhabited territory on steep mountain slones. Glendale has al-

LAN access points, and Harmon said the city will need "hetween 20 and 30" for highspeed connectivity in its inhabited areas

Arthur Daley, vice president of marketine at PAI Systems. said he decided to use 802.11 wireless LAN equipment from Ltd. to support Glendale's

vides only IM hit/sec, throughput compared with the IIM bit/sec, handwidth of 802.IIb Wi-Fi gear, but it offers a much wider range, Daley said. Since the security of wireless LAN systems - expecially those used by public safety

un Glendale's citywide system with software from Ecutel Inc. in Alexandria, Va. Ecutel will provide each mo-

hile user with triple Digital Fncryption Standard virtual private network tunnels, as well as mobile IP protocols to enable easy roaming among ac-

Dube said the citywide wireless LAN deployment is another example of the technology encroaching on high-speed mohile dera services from cellular carriers. Those carriers, in turn. have started to embrace the technology as an adjunct to their wide-area systems. The real threat of a Glendale-type auencies - is a critical conwireless LAN system to cellu-



terms such as the one above for

lar service will come when such a system is opened up to the greater populace, not just a core group of municipal emplowers. Dube said.

### **Energy Dept. Runs Security** Tests on Wireless LANs

Sandia Labs

weighs advantages, risks of technology

Sandia National Laboratories has begun testing wireless LANs to determine whether they can meet the kind of rigorous security required for Department of Energy facilities. Pace VanDevender, CIO at Sandia, said the lab has started limited testing of wireless LANs in an isolated test bed outside secure areas because, in his view. "wireless is the

wave of the future." VanDevender said that although Sandia currently has a ban on all wireless networks, the ability of wireless LANs to allow access to data any-

where without the need for Ethernet cabling makes a compelling business-process case.

The Albuquerque, N.M.-based lab also has facilities in Cali-

Sandia's sporoach contrasts sharply with a temporary bon on wireless LANs instituted last month by another DOE lab. Lawrence Livermore National Laboratory in Livermore, Calif. Los Alamos National Laboratory in New Mexico has also started a security review of its wireless I ANs that could result in their elimination, ac-

cording to spokesman Kevin O'Rourke said Los Alamos currently operates wireless LANs in three buildings outside secure areas. He said that be didn't know when a decision would be made adding that the issue of wireless LANs and security at DOE facilities may be driven by policy at the

VanDevender said that despite security concerns, wireless LANs "make it much easi-

national level.

er to use and share information. in an ad box and exontaneous way." Potential new hires who come from college campuses with a robust wireless LAN infrastructure want to work in an environment where they can be "online all the time," he said. VanDevender added that composaride wireless LANs could lead to changes in busi-

Wireless

LANs in Labs The Department of Energy has said that it's wary of wireless LANs for security reasons. Different labs are taking different approaches to the technology: DOE forbids use of weekess systems in teghty classified areas of all its labs

Les Alamos Matienal Laboratory has a ongoing security review of wrightes LANs: tary put a temporary iron on wayters LAN unage last month, pending completion of a

ness by providing connectivity that's used for collaborative work and decision-making. Dennis Eaton, chairman of the Wireless Ethernet Compat ibility Alliance in Mountain View, Calif., said VanDeven der's experience reflects the impact of early adoption of

wireless LANs by colleges and universities. 'A younger gener ation has grown up with this kind of technology always at its disposal," Eaton se VanDevender said Sandia is

running its small-scale test of wireless LANs to better understand security issues about a technology that has been proved to be inherently insccure. He declined to identify what security issues Sandia is examining or what kind of add on products are being tested.

Wireless LANs that cow entire corporate campuses or widely scattered research is cilities, as in the case of th DOE labs, can "fundamentall change behavior putterns i the way people do their bus ness," Eaton said. But those adseninst the sensitivity and se-

curity of data sent over the not

They work all hours. They expect their computers

to do the same.

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### HP Lowers Prices on low-End Servers

ver appliances by 11% to 31%. The affected systems include HP's high-decelly I P1000's and I P2000's dals, which are designed for Web hosting uses and applications such as serving cached data to end uners. HP said the price cuts were driven by competitive pressures and

#### IBM Readies Memory **Booster for Systems**

Old said it class this mouth to add to its line of lotal-based servers. The technology includes an alcorithm for encoding data that makes to be deable its actual size. ISM seld, Sents Clare, Calif.-based

#### overWorks Corp. has Sconsed show for appoints sale to Patch Issued for Blackice Firewall Hole

ms loc. released a patch to fix a denial-of-service security flavo in the Windows 2000 and IP ver-sions of its Blackics Defender fire wall software. The flaw, called a ping flood vulnerability, lots afto era crash unprotected systems by ing a large number of data

#### Short Takes

otor AVMET INC. bired Robert sen as its CIO, effective March 4. lases provincely worked as CIO at our York-based CENDANT CORP.

The INTERNET CORPORATION FOR ASSIGNED NAMES AND NUM BERS to Marina del Roy, Calif. ghen Crecker to head a

### Retailers Mull Pulling Plug on E-Commerce

Some execs say harsh economy may lead some firms to scale back Web presence

BY CAROL BUWA

EDERATED Department Stores Inc saunned the retail world late last year when it ceased selling merchandise on its Bloominedales com site. At last week's eTail 2002

conference here, some retail executives and experts predicted that more traditional retailers may pull the plug on their e-commerce sites this war - or at least resevaluate and scale back investments in online operations

They said the harsh economy is forcing retailers to take commerce operations, which were expensive to hunch and can be costly to maintain. For most retailers, online sales still represent a very small fraction

#### of owerall sales. The ROI Factor

"I think there's going to be some fallout. It'd he naive to think there iso't going to be." said Brian Kilcourse, CIO at Longs Drug Stores Inc. in Walnut Creek Calif noting that he expects to see some retailers shut down their e-commerce operations.

He said one problem is the high cost of entry for e-commerce. "You need to spend \$20. million to get the beginnings of a Web offering - well, in our case, that's four or five stores." Kileourse said. "So one of the things the CFO will ask, rightly, is, 'Am I going to get four or

five stores' worth of ROI out of this investment?" But Kilcourse added that retail executives need to keen in mind that a Web presence is intended to build their brand. not merely generate sales. Ralph Briskin, director of

e-commerce at The Meo's Wearhouse in Houston said he doesn't see how major retailers' e-commerce sites can "he profitable on this year's basis or this month's basis or teday's basis, let alone pay back on the investment they've made." "This is not like going into a

store and putting up some fixnurse and then they stay there for years on end," he said. Dvan Triffn, a financial analyst at Deutsche Bank Alex. Brown Inc. in New York und retailers are facing tremendous pressure to focus on the bottom line. "The economic environment is forcing people to make strategic decisions about what areas they can cut, where they can save money.

she said "and Ie-commercel is an obstour stee to look at first because it's the newest [and] ir's taking a lot of money out of the budget.

Lane Bryant Web Site Pays Off Without E-Commerce

in contrast to the scores of retailers struggling to be croft on their e-commerce operators. Lane Breant claims that it's making money even though it does sell any merchandre from its Web site. The Reynoldsburg, Ohio-based worm retailer spent less than \$500,000 on its Web site lest

way yet it traced \$21.2 million in store sales to the ninctronic coupons and bar-coded gift certificates it e-mailed to registered customers, according to Jer Carnobal Peterson, director of brand develo Gift certificate sales grew 20% from 1996 through 2001, with \$500,000 of the \$3 million in total sales via

the Web site, she added. "We're scrappy." Compbell Pe-terson said. "We don't have a big budget. We use guerniis tactics to get a huge bang for our buck."

Lone Beyont Issueched its site in 1997 as a tool to help it change its image as a "dowdy brand for grandma," Campbell Peterson said, Now, the e-real de terns more than I million names, and the site logs 700,000 unique visitors per month, with its ChichChail

ounterner forum attracting the most usage. The site's 3-0 virtual models have drawn 250,000 spile to try on clothes displayed through the site, and 367 television stations have aired news stories about

items as Federated did with Macva.com, makes sense. But pulling the plue on the site was a "knee-jerk reaction" and a Thurse micrake Toba said "It was very very shortsight-

ed, because they have to relaunch it and differentiate it all over again, which is a lot of money" Spieler said adding that she doesn't think other retailers will start pulling e-com-

Larry Promisel, manager of Internet marketing at New York-based luxury retail comname Coach Inc. said retailers should scale back their sites rather than shut them down \*Every initiative we do is at

least profit-neutral," he said. For instance, the company once nixed a potential investment in live chat because it couldn't prove that the invest-

ment would not off "There was no analytical data, and it was just too expensize and too time-consuming from a customer service stand point," Promisel said. He noted that Couch would have had to train sales representatives and

install and test the software. Couch is reconsidering live chat, with plans to do tests on a small scale to see whether

#### Debate continues about Federated's decision to halt e-commerce on Bloominedales.com. Geri Spieler, an analyst at Gartner Inc. in Stamford, Conn., said it will help the company close scaling back a site to offer fewer more sales, he said.

Total paint \$796 6 Million

E-commerce \$7.5 billion

E-convinence as a percentage of total cales 0.9%

"A lot of companies are real-

izing they spent a lot of money

on this channel and haven't

necessarily gotten anything out

type presence might be ade-

quate for some retailers, but

others face tough choices if

their customers have come to

expect transaction-based sites.

of it ? Troffe sold A storefront or Yellow Pages

Triffo said

the site, including 52 in major markets, according to brand development manager Beckli Rundels. One recent webcast of a Lane Bryant lastion show, featuring the rock band Kiss, drew 65,000 viewers

Data acabasis has shown that 40%s of the Web visitors are new customers who haven't made a trackable purchase in any of Lane Bryant's 653 stores or furned up on any direct-mail lists, Campbell Peterson noted.

actional because surveys have oversity that customers "want it so desperately." And she said she has even started to some some customers harboring to little incredutous attitude that we don't have one. But e-commerce ween't an option under Lane

Bryant's former parent company, The Limited Inc. in Columbia, Ohio, which health made it a priority. Camp bell Peterson said. The new owner, Bensalem, Pa-besed Charming Shappes Inc., has shown interest in



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do all this without any disrupsion. This standardized enterprise architecture allows you to scemiestly integrate voice, video, wireless, storage end data applications on a single, scalable network. This includes new end existing technologies alike. Whether you're building your enterprise network or extending it with Cisco Powered Network services, take adventage of the tools below to get it done right.



MPC#SAPIG THE INNET GENERATION® u" Desler sald. "It seems to be

a transparent publicity grab."

In its statement. Microsoft ac-

cused Cigital of engaging in

"blacant advertising through fear-mongering" in an attempt

Dealer said sour granes may

have also played a role. Cigital

had previously been in the

running for a contract to do se-

curity reviews for Microsoft

out there for a lot of products

but not [for] all," said Marry

Lindner, an incident-handling

SNMP services let network

administrators remotely moni-

tor and configure devices such

as couters and switches. CERT eald the subsershilities that

have been identified result

from differences in the meth-

ods vendors use to receive.

team leader at CERT.

Microsoft rejects claim, defends Visual C++ tool

nessure broke out last week between Microsoft Corp. and a security consulting firm over the safety of using a feature in the compiler that comes with Microsoft's new Visual C++ .Net development tool.

Dulles Va-based consultan cy Cigital Inc. said the security feature can result in developers unwittingly creating programs that are vulnerable to buffer overflow attacks But Microsoft rejected that claim and said the feature called a /GS switch. "introduces no security vulnerabilities into applications

Gary McGraw, chief technolnew officer at Civital said the switch is supposed to protect applications against buffer overflows caused by malicious hackers, Instead, Cigital said in an announcement, the mechanism "itself is susceptible to a buffer overflow attack." As a result, the consulting firm added, developers who use the feature "mov come sway with a false sense of security and unintentionally discount critical implementation problems."

McGraw said the switch is the only part of the compiler that annears to be a problem. The met of the Visual C++ Net and Visual C++ Version 7 comoiler is fine from a security standpoint, but "that one feature shouldn't be used," he said. However, Microsoft said in a

written statement that its documentation spells out that the switch wasn't designed to preyear buffer overflows. The feature can belp developers identify such threats and then be used "in conjunction with other security practices . . . to help make applications more se-cure." Microsoft said.

Microsoft Isunched Visual C++ .Net last week (see story.

page 8). Cigital's warning followed and was unusual in that it came only a day after the consulting firm notified Microsoft of the alleged problem. Microsoft spokesman lim Desler said Cigital publicly aired the claim without giving Microsoft enough time to re-

enough "This is not how a serve-

Continued from page 1

SNMP

### Corrective Act

the CERT Coordination Conter at Carnevie Mellon Univeraire in Pietsburgh "Lote of devices from mery

single wender we deal with arc offerted" said Marr Kesner. chief technology officer at Fernwick & West LLP, a law firm in Pale Alto, Calif. "I can't imagine a broader problem." Because of the widespread nature of the threat analysts. eaid firms that one SNMP need to take immediate action, "This is one of those 'pull the emergency cord. go fix it today

kinds of emergencies," said analvet Bill Gassman at Gartner Inc in Stamford Conn. But some vendors, including

Cisco Systems Inc., Hewlett-Packard Co. and Microsoft Corp., are still working on patches, "There are patches

Warning Delayed to Give Vendors Time

covered by a security research group at a university in Oulu. Finland, last year. But CERT and the Finnish research group held off on publicating the problems to give ndons time to develop patches While some vendors still don't es for their products, Morty

decided to issue its advisory because information about the value tour CENT's product harding

abilities was beginning to surface "It's time to an public and let everyone know that these winers-billion cost," Lindner seet. "I doub! that there is even one large orga zetion out there that is not effected by these winerabilities.

### Code Troubles

Cigital claims the security problem does the following: m Affects Visual C++ .Nat or Visual C++ Version 7 compile

o if left in the code, can i unauguecting mers expen e Can be avaided by not

McGraw said the report of the alleged flaw is unrelated to the fact that Cigital didn't win the cootract. "There's absoluteby on truth in that," he said, "We do software security analyses for customers worldwide every days to a few weeks, he said. decode and process SNMP service requests. Many of the

processes are flawed and can

produce denial-of-service con-

ditions and buffer overflows

that could be used by attackers.

in the past about the security

seem don't enable the technol-

ogy in their systems as a result.

But for those that do. Kesner

said, identifying affected prod-

ucts and applying the required

fixes could be a challenge, es-

"It is an extremely major

problem," said losh Turici, net-

work services manager at

Holyoke Mutual Insurance Co.

in Salem, Mass, "The more in-

tricate your network is, the

According to Lindner, just

figuring out whether installed

systems are compromised will

take work. "It depends on how

you have a particular product

deployed "he said. "It may or

The Cub University Secure Pro-

moving Group reported the vul-sabilities in SPMP Version 1 to

CERT, which then contacted ven

dors that might be affected. The

Lightweight Directory As

more exposed you are."

pecially on large networks.

of SNMP, and many IT man

Concerns have been raised

day. Sometimes we win work Sometimes we don't." Security analysts however

appeared to be uncomfortable with Cirital's reporting procedures in this case Free Hernmendinger at Aberdeen Group Inc. in Boston said. "One day is not a reasonable amount of time" to give notice about a flaw before going public. "I

mestion somehody's motives when they jump the run. "You always tell the other company before you make an announcement," said Charles Kolodey, an analyst at IDC in Framingham, Mass. Normally. the advance notice given to vendors ranges from a 6-w

ONLINE RESOURCES To send CFRT's advance on the SMA vulnerabilities, on to work port ore/ advisories/CA-2002-CR bend Lets of wendors contacted by CERT can

the first of all money. Mr. conf. confedit/fit 854308 and www.kb.cort.org/vds/kb For more information about the Outs Uni

versity Secure Programming (Ivous, visit years on make fi/research/sumps/ may not be vulnerable. The

If patches aren't available from vendors yet, it may be best to disable SNMP services. CERT said. But in some cases. companies will need to filter externally initiated network traffic to fully protect themselves, even if their SNMP services are disabled. CERT also recommended other steps IT managers can take to mitigate the risk of attacks (see chart) Such measures can degrade

network services but should still be taken, Gassman said. Turiel said Holyoke Mutual ions to apply patches to all the

many of its SNMP services. said Jeff Ogden, director of high-performance networks at Merit. But it's installing patches and re-examining its net

combinations are complex."

SNMP-based products on its network, even those that don't have the protocol enabled. Merit Networks Inc., an Internet service provider in Ann Arbor, Mich., has disabled

work filters anyway, be said.

# 1

### How many IT guys does it take to change a mobile projector into a conference room projector?

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### Xerox Calls on CRM to Help **Bolster Turnaround Attempt**

ROI expected within a year of installing software

OV MARCE SO Yearn Corn is investing in two new customer relationship management (CRM) applications as part of its effort to boost sales after two years of

The Stamford, Conn-based maker of copiers and other business equipment plans to install call center and channel management software that it she said

hopes will belp cut costs and increase sales. Xerms said it exnacts the CRM technology to deliver a return on investment six to 12 months after the rollout is finished early next year.

The CPM project is a key niece of Xerox's initiative to regain market share following lorses of \$293 million last war and \$384 million during 2000, said Mary Donato, vice presideet of the company's Tele-Web sales unit. That operation has been planning for the rollout since May to "make sure we don't make the same mis-

takes other companies have."

For example, Xerox included a three-week system simulation and business modeling neacess for the call center anplications the said End stery did trial more with the coftware so they could see how it works and summer ways that it could

be customized for Xerox. The call center and channel management applications are from San Mateo, Calif.-based

Siebel Systems Inc. The Siebel call center software should let TeleWeb's 800 online and telephone sales workers in North America access customer data from backend systems more rapidly than they can now, Donato said. The rollows is scheduled to start in April with a pilot installation at a call center in Saint John, New Brunowick that has about 190

users. If all goes well, Xerox

13 other call centers this year and wrap up some secondary project work next year.

A Xerox snokesman said the company plans to install Siebel's eChannel software later this year. Xerox will use the channel management application to collaborate with its network of more than 3,000 deal-

ers and resellers and to give them screen to lists of frequently asked questions, customer service templates and other tools

### Integration Challenges Donato declined to disclose

the budget for the CRM project but said it will cost millions of dollars. The call center software will replace homogrown Windows-based systems, but TeleWeb will continue to rely on some existing applications will expand the applications to such as a customer data ware-

house built around an Oracle Corn database Creating the integration books needed to tie the Siebel

software to back-end systems and the data warehouse will likely be the toughest part of the project, said Joshua Green boum, an analyst at Enterprise Applications Consulting in Daly City Calif. Such interra tion efforts are expensive. time-consuming and easy to botch, Greenbaum said.

Xeron's direct sales force is n't included in the CRM proj ect. The Xerox spokesman said the company hasn't announced any new CRM plans for that unit, which now uses a serie

of proprietary applications. RETHIS ISSUE Our CRM Konseinders Contay energed renor starts on page 27.

When choosing a technology partner, there are many things to look for.

Always start with this.

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### Kodak Sues Sun Over lava Technology

Kodah Co. Slad a lawrest clair hat Son Microsystems Inc.'s Java mology infringes on three sets it holds. Keelsk said the rior have been discussion the a without coming to a resolu for more than two years. Sen said that the infringement suit, filed at the U.S. District Court in Rechester.

#### Network Associates Sions Gauntlet Deal

of its flountlet firewall and virtual a delivery date for a new hightwork gateway software and ontical switch with sunes to San Jose-based Secure port for multiterabit data rates. ing Corp., which offers a ine of rival products. The compa deal, which they expect to complete this week, Senta Clera, Calli-based Network Associates put the Gazzet let unit up for sale last full.

#### Canadian Firm Buys Fyndus Data Center

O Motworks Inc., a Toronto-bas ing firm, said It's boying a er in Brampton, Detarlo, from enemanications Inc. for an ed orice, Santa Clara, sed Ezodes, which filed for uptcy protection in Septemer, said most of its business ass

e. Calif.-based METWORK NCE INC. returned to oref-Bity in its third quarter ended 5, but the storage vendor's 7 -Ton set income was de % year over year. . . . GEO-

### Nortel Struggles to Rebound, Build Sales

Vendor delays optical switch, warns that hitting OI goals will be difficult

PORTE Networks Corp's attempt to recover from the huse losses and resenue declines that have been plaguing it didn't eet anv easier last week.

The Bramoton Ontario based telecommunications and persoring equipment vendor announced had news on three fronts. For starters. Nortel re-The company also warned

that it could have trouble hitting its first-quarter revenue tarnet. Nortel CEO Frank Dunn said in a statement that sales are softening because of "even more receive by customer than originally anticipated to minimize spending in the near term." As a result, be said. meeting the first-quarter plan will be "more challenging."

lo vet another disclosure. Nortel said Terry Hungle gave up his job as the company's chief financial officer after the firm learned that he had made personal investment moves involving its stock prior to two announcements last year. Dunn, who was CFO before becoming CEO on Nov. 1, will

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oo deliveries, snalysts said, the delay of the new mitch underscores the uncertain business outlook Nortel and its networking rivals are facing

"Times have changed," said Zeus Kerravala an analyst at

they think the market expects an announcement," be said. During the current quarter. Nortel's sales are expected to The Yankee Group in Boston. \*People don't buy technology be about 10% below the \$3.5 because new technology's out. billion revenue level the com-You need to give them a soltnany reported for the last three tion that either makes them months of 2001. But Nortel, which lost \$773 money or saves them money."

What's at Stake pects to see a gradual rebound Stear Leaden, president of in sales starting in the second consulting firm Leaden Assoquarter. The company also recirtes Inc. in Washingtooville. NY, said the last thing any netthat it will return to profitability in the fourth quarter.

working vendor needs in this market is to get a reputation for selling buggy products. "I'd rather see them make sure they've got it right than | will maintain "a lasertike fo-

### **Google Targets Intranet Data** Searches With New Devices

Linux-based server appliances bundled with search engine

BY TOOD R. WESSE Internet search engine vendor Google Inc. last week joined the market for technology than lets companies provide built-in search capabilities on their cornorate intranets

manage the company's finan-Mountain View, Calif-based Google released a pair of Linux-based server appliances that run its search software behind corporate firewalls. The new devices expand an existing offering through which Goode provides customized internal search capabilities to corporate users on an applica-

tion service provider basis Other vendoes that market intranet search software inchade Fast Search & Transfer ASA. AltaVista Co., Inktomi Corp. and Yahoo Inc.

Avi Rappoport, an analyst at Search Tools Consulting in Berkeley Calif., said Goorle is taking a different approach than those companies by bundling its software with server hardware. Customers who want to install the Google Search Appliance can "just buy it and plug it in" to their inter

During a meeting with fi-

Search Inside Google's appliance for searching corporate in Includes the following features: MARCHIARE; An Intel-based server

SEARCHABLE DATA: HTML WILL pages, Microsoft Diffee, Portable Docu-ment Format and PostScript documents SUPPORTED DATA MIDEY: 150 000

militares on a launer model STARTING PRICE: \$20,000 for an entry-level system

nouncement finst! because billion last year said it still ex-

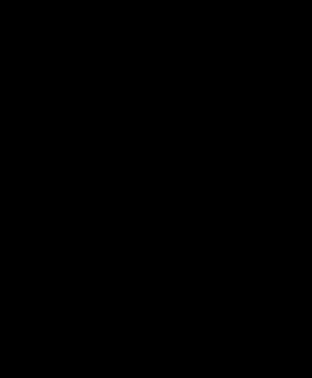
cus" on a pared-down portfolio peated an earlier prediction of bieh-marrin products aimed at the St largest telecommunic cations carriers worldwide. nancial analysts in New York George & Chief to of the IDG last week Dunn said Nortel News Service contributed to

> nal oetworks. Rappopert said. The bundled strategy is also good for Google because it should belo the vendor limit compatibility problems and other technical issues that can crop up when users install software on their own servers. said Laura Ramos, an analyst at Gies Information Group Inc. in

Cambridge, Mass. Still to be seen, however, is how Goode will handle shipping and supporting hardware products for the first time after previously being solely a software vendor. Ramos said.

Two models of the search appliance are available: a small device for departments and midsize companies, and an expanded one for larger companies (see chart). Pricine starts at \$20,000 and \$250,000, respectively, and includes two years of support and updates.

according to Google. National Semicooductor Corp., a chip maker in Santa Clara, Calif., was the first company to buy the new devices, said Google product manager John Piscitello. The appliances can also be used to provide search capabilities on external Web sites, he said.



### **NFWSINDUSTRY**

### Kodak Sues Sun Over ava Technology

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millions on a larger model ATTEM PRINCE: \$20,000 for an

hillion revenue level the company reported for the last three But Nortel, which lost \$27.3 hillion last west said it will ex-

pects to see a gradual rebound in sales starting in the second quarter. The company also recus" on a pared-down portfolio of high-margin products aimed peased an earlier prediction that it will return to profitabili at the 50 largest telecommuni cations carriers worldwide.

George A. Chidi Ir. of the IDG News Service contributed to

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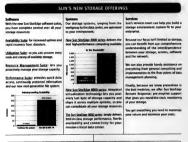
# AND AT ONE TIME, THIS



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#### Storage for Solaris' or a heterogeneous environment? Why not both?

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DATRICIA KEFFF

### Buck the IT Blame Game

SHERRY A STIRTLE and damaging trend afoot, one that threatens the reputation of many a hardworking IT department: Companies are starting to blame business decisions on IT's shortcomings.

It wasn't that long ago that businesses turned to IT as the solution to their problems, touting it as a competitive weapon. As long as it served to enhance the bottom line, it was "IT to the rescue." It seemed as if no problem was insurmountable given the right application of technical know-how.

But that was during the en-en days of growth and experimentation, when communies couldn't make - or spend - money fast enough. And throughout it all, IT was positioned as a strategic tool. Then we found out that the New Economy was sublect to the same rules as the Old Economy, And the recession hit, collid-

ing with an emerging climate of intensified government reculation and policy-making in the areas of security and privacy. And businesses started retrenching and running for cover behind IT's al-

Now we're seeing a change in tactics. Executives who are now being told to follow rules, implement safeguards or provide services that they would rather avoid - and that in the short term won't add to the bottom line - are suddenly citing IT as the reason they can't comply. This is a bad strategy for companies, and for

the country as a whole. Yet they are doing this, even though we all know better, and despite the fact that in most cases they will have no choice but to conform. Whether CEOs realize it or not, the last thing they need right now is a complicit or complacent IT department

IT executives shouldn't let their systems be used as an excuse for bad business decisions, because an educated public can easily disprove that contention, burting a company's credibility and business in the process. No one is going to believe, for example, that the same company that had no problem building an efficient data

lect, categorize and update customer names and preferences won't be up to the challenge of handling opt-in regulations ("Vermont Opt-in Rules Sour Suit." Feb. 111. Nor is it believable

that companies can't update their records to reflect customer access choices I\*FTC Proposes Do-Not-Call

List." Jan. 281. Nor should IT sit idly by while company executives claim that they have neither the money nor the systerms to implement new privacy and security regulations. Look around. In some cases, the systems you need are already in use in Europe. You need to be working on a Plan B while the business side soutters, threatens

and stalls. These new laws are now a fact of life for IT operations in the IIS Affected companies need to comply with the laws, and not to the bare minimum. Those that don't will nav a price l'Eirms Held to Privacy Pledges," Reb. 41.

Wise IT leaders will understand that these issues aren't going to go away, even during a so-called antienvernment Republican administra tion. It's a necessary burden of the 21st century. So it's critical to stop mining operation to colmaking excuses and design privacy and security into operations from the ground up. More to the heart of

most business decision-makers, lost time is lost money and lost opportunity. So once again, it'll have to be IT to the rescue.

money on running the system than on the actual hardware Galen Schreck, an analyst at Forrester Research, says, "Companies can buy lots of storage, but the cost of managing it is a nightmare." That's because vendors don't sell storage the way users buy it. Users solect storage based on application type and data requirements, not the vendor.

Vendors arese that customers want one storage provider, but they miss the essence of the demand: Customers want one management view of their storage options; they're not fixated on the name on the arrays. Customers want storage-on-demand as a service from a single console. Schreck says. "The real measure of

success is not whether you have a complete lineup of storage software or hardware. The long-term success is,



#### DIMM FOX Standards Hole For Storage

Management EMOLAND is populated with vendors that promote the virtues of onen standards in a heterogeneous world but give product demos limited to their own equipment. I suppose Sun Microsystems should be commended for selling software to manage storage devices from competitors such as EMC, IBM, Compag and

Hirachi as well as its own. Alas, Sun didn't show this at its roduct unveiling, opting for a familiar all-Sun tle to solve the vexing problem of wendors using







How does it play in a beterogeneous environment?

Ginen that the worldwide storage management software market will grow from \$6.6 hillion last year to \$16.7 hillion in 2005 according to Certmer's Datagnest unit, it's fair to ask: How much of that will be spent on redundant software that users buy because

they're locked into particular arrays? Well, maybe not as much in the future as they do now, for two reasons. First, in January, Hitachi. Inrange Technologies, IBM, Storage Tek and Veritas completed interoperability testing on two jointly developed SAN

products registered with the Storage Networking Industry Association Second, technology at the switch level from startum switch companie such as Pirus Networks for SANs and 700 Storom Software using a file system approach, should provide management regardless of device.

if storage vendors don't move from testine to implementation of storage management standards quickly (helping users simplify administration and reduce overhead), users will have the came is undicad view of vendor interoperability claims that they have of vendors' "interoperability" demos. 9

DAN GILLMOR

### Unix on Rise? Mac's OS X May Mark Spot

a business decision and as such should be subjected to the same sort of ROE analy-NIX PISING? Maybe. sis that any other large busibut the story isn't just ness decision would receive. Linux, and maybe it One additional point to consider is that companies that isn't just on the server.

Like many people, I was intrigued, if puzzled, this month when Sun Microsystems told the world how much it loved GNU/Linux, I'm still not precisely clear where the open-source operating system — better known as just plain Linux - fits into the Sun firmament, but it's safe to say that Linux got a serious boost

Sun's move was only the latest such announcement from a big enterprise vendor IRM's embrace of Linux has been well documented, and even Oracle recently said it's putting Linux front and center in its strategy.

All these moves had more to do with servers than clients, however, For all its strides above and below the desktop (the latter in embedded uses), Linux

hasn't made enough progres much as I want to shed the

Microsoft monopoly Yet I'm typing this colum on a PC running a variant of their le fact this version of Unix is becoming by far the most popular for deskton

users, at least in the 115 The PC is a Macintosh Apple's Mac OS X is Berkeley Software Distribu tion Unix under the covers.

with Apple's typically elegant user interface on top. There's a lot about the operating system that's unfinished, but on balance. I'm finding myself increas-

ingly comfortable with it. Not long ago, the notion that the Mac could become the ultimate Unix desktop computer would have been ludicrous. But Apple's done a remarkable job of bringing an industrial-strength operating system to the desktop with-

telling symptom of a comp

er's Game," Business, Feb. 4).

The decision to outsource is

outsource may be concern-

trating too much on cutting

costs and not enough on in-

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crease revenue.

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out irreparably breaking older applications, which non in the "Classic" mode without modification. Apple worked bard to get networking running well settings. But that's only

particularly in corporate part of the battle. If a comnamy is wedded to Microsoft Exchange, OS Y is home. cally a nonstarter. There's on OS X Outlook client. and the OS 9 Outlook client isn't up to snuff with the Win

down version At least Microsoft's Office suite for OS X works well, better in some ways than its Windows counterport. Meanwhile, some vendors have yet to nort their most popular ap plications - Adobe's Photoshon, in particular - to OS X, an odd lapse.

Maybe the truly interesting potential for the version of Unix called OS X is

now have a platform that could be ordem of magnitude larger than any they've ever seen. What pew annilications might emerge?

In the county months I've been using OS X. Fee returned to the days when computing was fun for hobbvists That's not an endomement, needless to say for a peneral-number platform. where the main requirement is that it should just work. But to the extent that software innovation might revive after a lone dry stretch under the thumb of the Redmond monopolist, the industry could be in for a new phase of innovation, especially since this is one platform Microsoft doesn't control Oddly, the rise of the new Mac OS

could end up being good for Linux Applications that run well on OS X could be ported back to Linux, giving developers a larger target market than they have today. Are we going back to the future with

Unix? It's no longer a trick question.

### set to be realized. Unix programs READERS' LETTERS

One Feb. III. Fiven where the Analyzina Outsourcina opt-out standard is followed. T WAS INTERESTING that any ethical business would adopt option. The shame is Paul A. Strassmann has confirmed his earlier that it takes legislation or findings "that major outregulations to get some sourcing moves can be a

companies to do what is morally correct in the first place. I wish Vermont all the luck, and I hope other states follow suit Charley Cross

Foisnes Calif Chadey Crysolial Stream com

THE WARNING that "Vermont residents may be excluded from the kind of promotional offers and information that data sharing allows" isn't ex-active a threat. I'd love to set agers to cut costs without alless spam and junk mail. I hope California enacts a sienilar law. Frie Welden President and CEO

Workbox Inc. See Francisco Cheers for Vermont Reas Let Your Voice Be Heard

EN REGARD to the recen letters to Computerworld its effect on computer jobs,

mers can do: Write to your congressman, senators and the president. You can get your representative's name at http://thomas.loc.gov/, a site maintained by the Library of Congress, It takes all of 15 minutes to compor a letter. Companies may

have big bucks, but you have the right to vote. If you don't write, then you have on one to blame but yourself. Маучита, бо.

arbage in, Garbage Out Linux has "all the frills of Windows mi-

mus the crashes and cost ("Baseball Cap Linux," Technology, Feb. 4). I have run DOS, X Window, Mac OS Unix and Linux. They will all crash if your disks are treated like a garbage dump Most Windows users have on idea how to keep their files orderly and disks defragmented. I teach users to think of the disks as their house. How many people never take out the parhogr or vacuum the rugs? They

need to think about the cor

er in the same way. R.Y. Kambic Johns Hopkins Bloombi School of Public Health

He Should Start April 2

Scott CHARNEY starts
April I as Microsoft's
new chief security strategist ["Microsoft Tan Former DOI Cybercon." News Feb 41 Is this som kind of joke? I can see the beadlines now: "Microsoft Finally Focusing on Security — April Fools!" Bob Base

Security architect Wilmington, Del.

COMPUTERWORLD welcomes comments from its readers. Letter will be edited for brevity and clarity. They should be addressed to Jorni Fride letters artifer Computation PO Box 9171, 500 Old Connecticut Path, Fransingham, Mass. 01701 Fax: (508) 879-4843. Internet letters@computerworld.com. Incl an address and phone number for immedate varification

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## KNOWLEDGE CENTER: CRM



# Sober CRM

Irrational exuberance gives way to smaller, tactical projects with a quick ROI.

#### EDITOR'S NOTE

HIS MIDDLE OF 2000 seems like a lifetime ago.
For customer relationship management
(CRM) systems, if was, Back then, the forecasts were builtie it "Market to Exceed \$24
Billion by 2005" — halb), and the money
flowed for new enterprisewide projects. Software
vendors, coassulantast and airline magazines latched

on to the buzzword and saw vast potential.

Then came the creeping distillusionment in 2001 as projects failed, credibility slipped away and CFOs

as projects failed, credibility slipped away and CFOs took an ax to CRM budgets. It doesn't help that at least half of CRM projects fail

to produce any benefits for the customer, according to Gatter Inc., researchers. Why such poor resulter Bud date, hed politics, bad planning, had processes and bad project unsungement. Not good news when large companies typleally spend \$30 million to \$90 million over a three-year period on a CRM project, including technology, labor, consultants and training.

Fortunately, companies are learning from their mistakes. Many businesses that falled with their first CRM project found that they could eventually get it right — on the second or third try (see story, page 30). Today, analysis use much more cautious language regarding the CRM market — like "modest growth."

regarding the control of the all the pragmatism. 
Pragmatism, indeed. Users are turning to tactical 
CRM projects rather than galactic ones. Now the goal 
is to use pared-down budgets to focus on smaller, 
high-payoff CRM projects driven by real business 
needs. Maybe a few success stories can sell this strat-

egy to now-skeptical management.
"Many businesses blindly pursue coststy CRM initiatives without understanding the challenges and costs
involved," a Gartner analyst wrote in a September report. That certainly won't be the case if you read this
Social Report and its outline companion stories. 8

Mitch Betts (mitch\_betts@computerworld.com) is director of Computerworld's Knowledge Centers.

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Colourny colors leature:

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10 Hour to pushin a CRM project during a recombine

If How to custain a CRM project during a recommen is blanks's plane for a 200-degree view of custamor



ne CRM Knowledge Center:

#### DETONING BELATIONSHIP MADagement (CRM) may be a new buzzword - it was coined in the early 1990s — but it's based on a pair of century-old ideas: that technology can make salespeople more efficient and effective and that the best way to sell your products

is to know your customer. By the late 19th century, the Industrial Revolution had made manufactured products plentiful and cheso. Businesses then began trying to apply the same systematic approach they had used to make production more efficient to the age-old practice of selling. John Henry Patterson, who founded National Cash Register Co. in 1884. gets credit for inventing sales presentations, sales territories and sales quotas. And in 1911, Olympic swimmer and Chicago Tribune advertising staffer Henry Jamison "Jam" Handy began researching why customers bought the

products they did and explaining it to

salesmen. He used flip charts and industrial films to give trainers a major advantage over the "shoeshine and a smile" approach of earlier salesmen.

Getting Organized In 1947, another advance in sales technology came when Morris Perkin, an attorney in Allentown, Pa., designed a system that combined an appoint ment book, a tickler reminder system. a detailed time record, a diary and record of all work done and activities. and a work planner and organizer. His creation, the Day-Timer, eventually became a key tool for salespeople to efficiently manage their time. In 1950, in-ventor Arnold Neustadter began sell-

# The Story

The principle behind CRM know your customer — dates back more than 100 years. By Frank Haves

ing his Rolodex circular card file --

then the state of the art for keeping track of sales contacts. Meanwhile, large businesses were laying the groundwork for the hightechnology end of the process corporate data processing IBM and Remington Rand were selling punch-card sorters to bookkeeping departments for tracking customer transactions. In 1952, Remington Rand began delivering its model 409 - the first computer designed specifically for business applications - and IBM rolled out the model

701, its first vacuum-tube computer. The proliferation of mainframe comnuters and service companies such as Ross Peror's Flectronic Data Systems Corp., which in 1962 began renting computer time to companies that couldn't afford to buy mainframes, meant that

and corporate data on customer trans actions was in electronic form.

Although the number of transactions stored on computers increased spectocularly through the 1960s and 1970s. computer and programming time was too expensive for most companies to use for anything but the simplest sales support. By the early 1980s, there were a few expensive, specialized sales support systems available.

But in 1985, salesman Pat Sullivar created Act, the first commercial PCbased contact management software. It was specifically designed to let salespeople track prospects, customers and customer data on a desktop computer instead of manually. Act was the first major step forward for salespeople since the Day-Timer, and it convinced corporate information systems depart-

better job of supporting salespeople. tomation projects launched by corporate IT shops in the late 1980s and carly 1990s were successful. Some salespeople resisted the technology itself but more objected to the idea that a commuter program was telling them how to deal with customers.

**Big Changes** 

But two other changes in the techpology environment made a shift inevitable. One was the opening of the Internet to commercial activity. The World Wide Web gave hirth to online stores - and the ability to track customer behavior very closely with toch nology such as "cookies," which were introduced in Netscape Navigator in 1994. Suddenly, it was possible to use customer information to costomize sales pitches on the fly.

The other change was the widespread use of PC-based client/server tools to access and juggle customer transaction data. Online analytical processing made data mining a reality which, in turn, made even more customized marketing practical.

By the mid-1990s, CRM had been

the new buzzword that combined sales force automation, sales-pitch customization and other systems of managing and using customer information. Sicbel Systems Inc. in San Mateo, Calif., adopted CRM early as a way of distin-guishing itself from other large packaged-system vendors. But today, SAP AG. Oracle Corp. and every other enterprise resource planning vendor offers CRM too



#### Here are three-hundred-eighty-ninethousand-four-hundred and thirty-four



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Many CRM projects fail the first time. Success doesn't come until the second or third attempt. By Kim S. Nash and Marc L. Songini

Putting in a decent cusner relationship manement (CRM) system is as perilous as installing enterprise resource plan-CRM projects fail more often than not, analysts say. The software is hard to install. It forces a lot of change, quickly on business units. And even wheo companies manage to install and link applications that hold client information, they often don't serve customers any better, reports Gartner Inc. in Stamford, Conn. New York-based Mercer Management Consulting Inc.

calls CRM a "money pit." But some companies have gotten CRM to work well, albeit on the second or third try. It's in the repeated attempts that the real lessons are

learned. Some of the disappointment can be chalked up to classic bad habits in IT. such as not listening — sometimes oot even talking - to end users about what they want in a new system. Or the CRM team may try to do too much at once, which almost guarantees de-

lays and cost overruns. But there are lessons particular to CRM that veterans share

PeopleFirst Finance LLC, an online car loan company in San Diego, dived into CRM in June 2000, when it tried to install a complete suite from a well-known CRM yendor.

It was clear about three months into the installation that things wereo't going well, says Sharon Spooler, vice president of business intelligence at PeopleFirst.

For example, there was no easy, automated way to manage bouncebacks from e-mail sales pitches that didn't

### KNOWLEDGE CENTERCRM

reach intended recipieots, she says. Also, the software couldn't properly track multiple versions of electronic pitch letters. The result: People First couldn't get an accurate view of which

campaigns worked.

"We tried problem-solving with the vendor. We tried a lot of different things to make it work. Every time you'd think you had a problem down, another one would pop up." Spooler says. "It was like a game of whack-a-mole."

Spooler declined to name the vendor, citing a deal struck when People-First killed the project in March 2001. Now PeopleFirst outsources many problematic CRM tasks to Digital Impact Inc. in San Mateo, Calif. Digital Impact handles the administrative part

Impact handles the administrative par of e-mail sales efforts, such as making sure messages look good in HTML and rich text, managing bouncebacks and tracking how many messages were undeliverable.

were undefliverable.
PeopleFirst, measwhile,
handles the content side of
campaigns. It keeps databases on things such as
which letters produce which
results and which customers
respond to which pitches.
Of PeopleFirs's initial attempt, Spooler says, "We
dreamed a little too big."

Cessna Aircraft Co. had a couple of unsuccessful rollouts of CRM systems before successfully going live recently with Fairfield, N.J.-based StryinsFront Inc.'s Visual Elk sales force automation product and Panorama decision-support tool. Cessna learned some "bitter lessous"

during its first two CRM attempts, in 1995 and 1996, says Dave Turner, manager of network systems at the airplane maker in Wichita, Kan. First, Turner says be learned to choose vendoes that will be around a long time. Cesana rolled out the first phase of its CRM system but had to delay the next stage until a revision of the vendoe's application shipped. It never did, he says, declining to name the supolier. Cesana killed the project.

with that vendor.

Turner says he also learned how to
write better software contracts. For example, the deal he negotiated with one
of his original CRM vendors had no
orphical provision for a redund if things sourced. But when the software didn't,
work, Turner was eventually able to
get a refund. "They did other business
with us, so it was in their heart interest

to keep us happy," he says.

Still, he advises other users to include such clauses upfront.

Denais DeGregor, vice president of CRM at Allstate Insurance Ca. in Northbrook, III. has avoided the full-suite opion. All-th-one packages are less expensive to maintain, acknowledges DeGregor, who has also done CRM projects at Mer-till Lynch & Co. in New York and US West In: But suites can lack key pieces, which means howing a sementate of the contract of the con

puckage to add oo and integrate anyway.

In late 2000, Alistate requested proposals from the major sulte vendors.
\*None of them came remotely close to having the functionality that matched our CRM vision," he says. Sebel Syntems Inc. in San Mateo, Calif. for example, doean't have a sales campaign manacement module, he says, and SAP AG

doesn't offer predictive modeling.

Alistate, therefore, went the best-ofbreed route. Its uses at least six packages from five vendors, including analytics and campaign tools from

### Making CRM Work

Mercer Management Consulting says CRM projects will disappoint if users focus too much on technology and not enough on business goals. To avoid that mistake, Mercer recommends that users take the following steps:

DEFINE growth goals for the company and the appropriate use of technology to achieve them. Never lead with the technology CAPTURE AND USE customer information that really markers. Resist the

360-degree outcomer view; it results in too much data of too little concequence

DEVELOP measures to prioritize and track a CRM project's success based on its ability to haid randomer with a and based breductivity

its ability to build outsomer value and boost productivity.

BURLD a database of incoviedge about customers by using "lest and learn" methods to continuously refine product and service pitches.

SOURCE MERCER MANAGEMENT CONSULTING OIL. NEW YORK, JULY 2001

Xchange Inc. in Boston and lead-management software from MarketSoft Corp. in Lexington, Mass. Alistate's internal IT staff is responsible for integration.

Wanted: Ambassador
One key to CRM, say those who
have gotten it right, is having a fact

have gotten it right, is having a facilitator between IT and marketing, customer service or whatever business unit is supporting the project. This person typically doesn't come from IT but has a good grasp of technology. Ideally, he should report to the CEO or some other manager outside the evenue he's traine to units.

groups he's trying to unite.

Spooler and DeGregor play that role.

So does Stephen Nehring, marketing integration manager at Sprint Corp.

The telecommunications provider half a too beston CDM reston.

The trescontinuations provided in a built a top-to-bottom CRM system inhouse. The system has been running for a year and manages F18 of data. When a request comes from marketing to capture more data about customers. Neshring explains to T1 wby it makes sense to free up storage or servers. "I'll may lay. We don't have any space." I say, I'll we have this type of information and if we could market to

this type of individual, it would generate this amount of sales, " he says.

Nehring also coaxes marketing to examine whether it really needs all the data it wants, citing how expensive it is

to store and access that data quickly.
All sides go to all CRM meetings.
"By having all those individuals in the
same room, we all put in our two cents
without months of e-mail back and
forth" before a decision is made, he
says. "We won't meet unless veryone
can be there. There's too much at risk."

It may be the nature of CRM that it takes a few iterations before both business and TT are satisfied. Every company does business differ-

Every company does bustness differently, even within the same industry. It's impossible for a single vendor to design a CRM pockage that includes the business rules of all possible users, says Denis Pombriant, an analysi at Aberdeen Group Inc. in Boston.

What's helping second-time CRM shops, as well as computies only now perting into the technology, is a new modulatily to CRM software, be says. Some vendors have separated the rules for how different parts of the CRM system interact from the code that makes the software work. That makes it easier for users to resed CRM applications to better fit the outlies of how they do to better fit the outlies of how they do

Chordiant Software Inc. in Cupertino, Calif., and J.D. Edwards & Co. in Deaver offer usu ha modular architecture based on Java, Pombriant says. "Inevitable, there's a need to rationalize the way software runs and the way business runs," Pombriant says. "It's a Herculeon effort to define an organization's business rules then encode them in software." 9

Nash is o freelance writer in Yorktown Heights, N.Y. Contact her at kimnash2002@yahoa.com

Online Exclusive
One CO offers address on making ONA pronote work, based on his related expenses in

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VEVIN FOGARTY

# Slow and Steady Can Win CRM Race

NFORMATION TECHNOLOGY MANAGERS are caught in a bind. Their budgets are shrinking faster than a snowman in a rainstorm, but that doesn't mean that their colleagues will stop asking for IT to help improve the business.

IT became strategic during the '90s, putting CIOs in the boardroom. Now, CIOs are on the spot to demonstrate that IT is as valuable in the thin times as it was during the fat ones. migration moving, but slowly.

There are only two real ways to do that, according to Ronald Boeving, vice president of information systems at health care benefits company First Health Group Corp. One is to find a way to get

the company into new market niches; the other is to improve and extend the services you offer

existing customers. This sounds like a situation tallor-made for a CRM system such as the one you buye probably partially rolled out But as IT budgets shrink, big CRM projects are among the first to get fregen out. A Meta Group Inc. survey

ence that companies with CRM projects are shrinking the scope and budgets of these projects by 35% on average. Gartner Inc. has expressed concern that this trend might cause a backlash against the whole idea of "customer-centricity," but the actual

danger is different If you freeze a mieration halfway, you might still have to pay half a million dollars or so in maintenance costs on the old system and twice that much for the new one, plus the cost of products and developer time to integrate data from the two. A better idea is to keep the

one vendor to another, call them both and ask to repreptine your maintenance and purchase costs - they might benefit from offering a discount. The old wender will benefit because it won't be losing you as a customer as fast the new one will help cement a new

relationship Cathie Kozik, CIO at Tellabs Inc., says that almost every vendor with which she has pried that tactic has arreed to repeatiate, even when the contract was best a few months old It's in vendors' interest to help you manage

Assuming you're movine from

having a hard time them-

If they resist, she says, it doesn't burt to mention that when good times return, you'll remember which vendors were willing to provide solutions to your budget problems. as well as your technical ones. If you're not caught midmigration, or if you're between phases, you're in much better shape. If you can break

a monstrous CRM project into smaller units, each of which has a clearly defined benefit, you can still make a and difference to went bottom line using parts of a olen you've proba-

bly already built. First nick a tar get you're sure will deliver so much benefit to the busi ness unit involved that it will lobby the CFO for the

money to pay for the system even if you sold the idea orieinally. To a CFO, IT proposals are always expenses; business proposals are investments.

Try narrow areas that will show improvements quickly: Make your automated voice-response systems so effective that customers don't

hate them (as much). Make more customer data wailable to call center opera tors so they can solve customer problems on the first call.

■ Add self-service features to your Web site. Add ordering and sales canabilities to your Web site.

even if you pass those orders to persilee or other partners ■ Improve the integration between your billing system and the customer's ordering system to make selling smoother. Do the same thing

between your ordering systeens and your suppliers, then ask for discounts in exchange for making the relationship

The key to the CRM concept, after all, is knowing what customers need and setting is to them. If you can make your

business more responsive to customers with small changes, rather than with massive CRM rollouts so much the better.

93%

## Why Do

increase customer retention/loyalty	94
Respond to competitive pressures	77°0
Competitive advantage from superior customer service	73%

MARCE THE CONFESSION SCHOOL NEW YORK, MACLEY 200

## Biggest

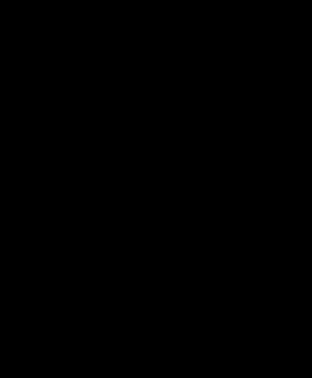
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KEVIN FOGARTY

# **Slow and Steady Can Win CRM Rac**

NEORMATION TECHNOLOGY MANAGERS are caught in a bind. Their budgets are shrinking faster than a snowman in a rainstorm, but that doesn't mean that their colleagues will stop asking for IT to help improve the business.

IT became strategic during the '90s, putting CIOs in the boardroom. Now CIOs are on the spot to demonstrate that IT is as valuable in the thin times as it was during the fat ones. says that companies with CRM projects are shrinking

There are only two real ways to do that according to Ronald Boeving, vice president of information systems at bealth care benefits company First Health Group Corp. One is to find a way to get

the company into new market niches: the other is to improve and extend the services you offer existing customers.

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## Touch **Points**



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THE BEST-RUN E-BUSINESSES RUN SAP



IT can help you find the hidden pearls in your customer database, but there are risks. By Gary H. Anthes



HIR CUSTOMER WARN'T bappy.
He had rived several times to
get in touch with someone at
the local office of Cypress
Semiconductor Corp, but no
one had returned his phone calls. So he
filled out a customer satisfaction questionnaire at Cypress Web site, and his
poor rating of the company automatitype say Vice precident of bradqueries
sales. Within 24 hours, Verd was on the
bloom with the customer and the local

sales office. "The customer was totally amazed. and pleased," Verdi says. "We booked business with him within three days." San Jose-based Cypress has made satisfaction surveys the cornerstone of its customer segmentation efforts and its entire customer relationship manage ment (CRM) program. In the chip maker's eyes, nothing so distinguishes one customer from another as each customer's feelings toward the company Cypress' real-time customer satisfaction monitoring system from Satmetrix Systems Inc. in Mountain View Calif. trispers the e-mails to Verdi and will soon produce the data that determines the homuses awarded to employees. based on responsiveness to customers

Companies often segment their castomers for different treatment. Frequent filers get the best seats (but not necessarily the best prices). Buyers of gardening books get pitches for more gardening books. Big-bucks investors never act put oo hold.

Data warehouses, data marts, data mining tools, statistical and analytical software, and CRM systems are enabling ever more sophisticated customer segmentation. But pitfalls abound, including allenating customers by making inappropriate pitches and ignoring customers with low current returns but high potential.

returns out mgn potential.

Cypeess has the right idea about surveys, says Fred Reichheld, director emeritus at management consultancy Bain & Co. in Boston. He says companies often spend millions of dollars on surveys but then don't use the results at an individual customer level. "So I are individual customer level." So I

**Picking Winner** 

could have said in a survey that I am unbelievably dissatisfied and the next time I talk to a cervice ren, they have no idea I ever said that," be says.

Another mistake companies make is segmenting current or prospective customers on the basis of demographics such as age, income, sex or education because that information is relatively easy to get. "But the best companies will seement based on fundamental values " Reichheld says

For example, he says, The New York Times Co. tried without much success to attract new readers based on demographics. Then the publisher discovered that readers of The New York Times shared certain values, such as an interest in lifelong learning. Those kinds of values can be gleaned from surveys and from mailing lists obtained from sources such as The History Channel, Reichheld notes, He now rates the Times "outstanding" in its

subscriber campaigns. FleetBoston Financial Corn has increased the number of people in its database marketing area from three to more than 30 in five years. The company says the tarneted marketing that its customer segmentation allows has boosted the returns from its sales cam-

naiens tenfold. Using time-and-motion studies and activity-based costing, Fleet has comouted the cost of every kind of transaction and customer interaction. Fleet can use that information to compute and track the profitability of every customer, and it can target its marketing efforts to individual customers and households based on their current and

nost contributions to the bottom line. To belo predict future contributions. Fleet buys data from external sources such as credit bureaus. "We figure out what's the customer's total wallet, then we can see what's our share of the wallet." sava Brian Wolf, senior vice president for corporate marketing. The possibility of getting even a small share of a big wallet makes such customers a

juicy marketing target. Fleet also uses a neural network system to watch transactions in real time.

### Is There a Statistician In the House?

6 Jack Theorem is a consultant and statistician who uses a practice called sian-wave logistic regression to find out what peces of data will be used predic tors of customer behavior, Recently, he used the method to help AT&T Corp. de mice who amono its customers are likely business travelers - based on call scords, demonstrate data and other in-

motion he won't mend Theurer's "science" comes from data mining and statistical tools from SAS in state loc. in Cary. N.C., but the "art" ties in his head, he says. "If you give 10 disticiens the same database, each

one will do it differently." he says He says the most common mistr ompanies make in statistical modelino for customer analysis are the follows Developing models as "black house and then blindly applying them over time without adapting them to changing Union incorrect or inconsistent data -

carbone in carbone out. It can spot patterns, such as decreasing transaction rates or balances for a high-

value customer, that indicate that a customer may soon leave. "We call them." Wolf says, "We found we could cut our attrition rate in half. In most cases, we had products they didn't know we offered."

#### 'If You're Rich, Press 3' At many financial institutions, in-

cluding Fleet, caller identification and routing systems linked to a database of customer bistories and characteristics are used to ensure that the most valuable customers get preferential trentment. Investors with million-dollar portfolios get to bypass those endless automated voice prompts and are routed to the most experienced service representatives.

The rigor of Fleet's customer analysis isn't for everyone, says David Hardm locketion data that ext? understood like way intuition as to what data to re-

churin "Thouser arbenes. Big companies are unlikely to get the job done with one or two part time and sts. Fingerbut Cos. in Minnespolis uses SAS software and hundreds of models to decide who out of its database of 6 million active customers will get each of

80 catalog realings each year. The mod els consider some 1 800 venebles. Randy Dráshi, Fingerhut's director of business intelligence, has a staff of 20 sticians who constantly tweek the idels and adapt them to changing orket conditions. When asked what advice he'd ove to IT mayours withou those resources, or without the imagin tion to think of 1,400 secretion. Details

says to start by doing segmentation seed just on the impurpoy and size of zere puys. "Il wax have a costomer detabase, at

- Bary H. Anthes

ing, a principal at consultancy McKinsey & Co. in Minneapolis. "Some companies spend years and years and millions of dollars building these databases, but when it comes to making a calculation around customer value. they can't pull it off," he says.

Often, the problem lies in trying to determine the cost of serving each customer, which is difficult and unneceseary Harding case It's norally sufficient to just apply average costs to cus-

tomers by emup. Some companies fail to send the information mined by analysts to the marketing, sales and front-line customer service people who could actually use it. He recommends having integrated teams of IT, statistical analysis and marketing people. Customer segmentation sometimes drives dynamic pricing, a model in which prices for airline seats, hotel

rooms, rental cars and other items change as supply and demand charge and vary depending on who is buying Such revenue management practices can add millions to profits, but there age risk-

In September 2000, Seattle-based Amoran com for found itself in hor water when some customers found that they were being quoted higher prices than other customers for DVDs. Amazon quickly abandoned the practice, calling it a pricing "experiment."

Amazon botched the implementation of a perfectly valid concept - that of offering better deals to those customers deemed to have exester long term value, says Deepak Sirdeshmakh. a marketing professor at Case Western Reserve University in Cleveland

"What companies do in a smarter way is stealth differentiation, in which the actual price customers see is the same for all segments, but then in the background you mail or e-mail discount coupons of different value to different customers, he save. Sirdeshmukh says IT-based initiatives often backfire because it's so easy to spit out promotional e-mails or make mertime telemarketing calls to some

favored customer segment. \*One of the biggest picfells of customer databases is that the best costomers are bothered endlessly - surveys, new offers, cross selling - sometimes by multiple people within the company," he says. "Peo ple are netting CRMed."

The solution, Sindeshi "You need smart thinking on top of the

The online division of Zeeland. Mich -based forniture retailer Hern Miller Inc. is determined to avoid that kind of mistake. The 16-month-old divi sion, called Herman Miller RED, is collecting data on the company's custo mers and will one day, for example, n tify frequent buyers of chairs when the company gets a new model in stock But the process isn't ready yet. "Our technology is ahead of our busine and there's a great danger in doing something because you can," says Mart Johnson, the company's Web site man ager. "The personalization won't pay

off until we have a critical mass of uses experiences and order histories." Online Exclusive

'S & Losers

Online Exclusion

Online in the control of the contro

CRM provides a bookseller with the data it needs to stock shelves with quick-selling, highmargin products. By Pimm Fox

USTOMER RELATIONSHIP MANAGEMENT (CRM) software is usually billed as a tool to help companies better understand their customers. But in the case of WH Smith LC. CRM helped the international book r better understand itself and how it

WH Smith wanted to get a grasp oo customers uying patterns, anticipate trends and more carefully alien investory to maximize profits in its 1,200 U.K. and stores. So Trevor Dukes, the company's head of information strategy, last fall worked with a team that included store managers and central office execves to install a Web intelligence CRM system from

McLean Va-based MicroStrategy Inc. The goal was to cut the amount of paper shuttling back and forth between stores and the corporate headquarters in Swindon, England, and give er managers greater insight into what is ning in their own stores and throughout

> Refore, "we had only been able to monitor sales and stock at the central office, and senior store managers were sending us tons of paperwork about their

stores " Dukes recalls. The comnications process was grindto a halt, and information was out of date once it was oreanized and put into reports In addition, while direc-

tives from headquarters about promotions or incentives did make their way to each retail out let, there was nary any integration or insight about the most profitable ems among the more than 60,000

CDs, books, games, stationery and is the stores offer. At WH Smith, with sales last year of \$3.9 billion and profits of \$188 million, this meant a re-

thinking of responsibilities and Continued on page 38

roles for store managers vis-àvis the central office executives. **Insights** nto Profits

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#### Continued from page 36

"What shores up success for managers in the field is if they are clearly profit-focused and have tools to get visibility and confidence about making merchandise and stock decisions," notes Ian Rowley, a 22-year

get visibility and confidence about making merchat dise and stock decisions," notes Ian Rowley, a 22-ye veteran and area manager for 20 stores. But the issue, according to Dukes, was how to

share information about what was profitable in one store with managers in other stores. Before the new system was implemented, there was no way to share this information.

The new Web-based CRM system begins general-

The new Web-based CRM system begins generaling reports in template from from the time a customer makes a purchase in a store. Sales and inventory data is sent from each retail location to a central data warehouse that store managers can access via an intranet. The Web version will be rolled out this year. The software tools available to managers include report templates and wizards so managers can get customized views of imventory based on criteria such as highest-mappin items ranked by sales.

#### A Cleaner Picture

Bernario and the WH Smith store in Destrictables, Scientification (Smith and Smith and

use brought in to provide better profit for the space. This kind of gramular information is one of the highlights of using any CRM system to gain greater return on investment. But the information available from a CRM system still needs to be acted upon, and the best, most raisely information is of little use unless the corporate strategy aligns with what the customer data is revealine, save Rob Moren, an anostromer data is revealine, save Rob Moren, an anostromer data is revealine, save Rob Moren, an anostromer data is revealine, save Rob Moren, and

lyst at Aberdeen Group Inc. in Boston.

For example, store managers with comparable demographics and sales volumes can see shifts in customer buying from store to store as well as from week to week, but they need the go-ahead to act on

the data. Stewart says be given key information to store complexes about which specific products sell the complexes about which specific products sell the stewart self-stewart self-stewart self-stewart self-stewart that the teal' will simple beer-selfing products in key areas with high display tensedating products in key areas with high display streaders and well-maintained stock levents. They are some of higher profit margin products which can be sold as add-out or displayed adjustent between the sold as add-out or displayed adjustent between the sold as add-out or displayed adjustent between the sold out of the search paging and the sold out to the search information or ideas to managers, such as out-oftered selleten to lead opportunities that can generate the search of the search of the search search and the search of the search search and the search of the search search search of the search sear

more sales and profit.

Before the CEM system was implemented, store managers had no way of identifying the most profitable products, so they couldn't allocate their time to profitable lines. Now, if a store manager sees that a book is selfing swell, be can move it to the front which dow and push the CDs that aren't selfing so well to a lower distribute and the country of the control of the country of the co

### Get the Most Out of CRM

Here are some tips on how to exploit retail customer data:



Match shelf displays and sales with products connected to specific holidays or activities. "If in July you see a blip in sales of books about barbecues, you stook about barbecues, you stook accordingly," says William R. Armstrong, a retail analyst at Ct. King & Accordingly. The According to the Internet New York and Sales an



#### Train users how to interpret CRM data to make adjustments in the inventory mix and other variables to make stores

wore profitable.

You can design the most wonderful system, but if you don't have users or data, if won't accomplish anything, says David Bradshaw, a CRM analyst at Owen Inc. in Reston.



#### To thine own self be true know your own business needs. All of the vendor have aside. CRM

technologies do have real value, and there is a need for them, says Bob Moran, an analyst at Aberdeen. But choosing the right CRM requires understanding your own business operations. Moran adds.



#### Be realistic.

CRM data isn't a panacea for poor business practices. "It won't fix a bad business, but strong success in CRM means going slow and starting small," Bradshaw says. "It is all about maximizing your store's layout," says Rowley, adding that because be's armed with data from the CRM system, he can see how sales are being produced and whether those sales are actually

generating profits.
"Our stores tended to be very sales-driven, as many retail environments are, but the store personnel didn't know what products were driving the profits," he says. Now, Rowley says, the stores' staffers know that disabraine hist-margin products such as

branded stationery or books will produce a better yield on the store's overall inventory. "We can track specific items, and if we see that a high-margin book is selling particularly well in, say, a station of the sta

high-margin book is selling particularly well in, say, tourist location, we can add a display at a shop that has high tourist traffic to try and take advantage of that information," he notes.

The CRM system is also shie to match actual bray.

ing information about customers at the point of sale, giving greater depth to information in the customer data warehouse. "The marketing people can really see trends from individual customers," Rowley says. Eventually, WH Smith will be able to tie individual customers."

ual e-mail promotions to in-store activity. "If we see that you bought books in one particular subject, such as Asian cooking, it isn't a far cry to imagine that we can let you know that a new Asian cooking book or as in-store promotion is about to launch," notes Dukes.

Bor now, though, Dukes sure he's hence with indi-

vidual stores can compare performance based on customer demographics and regional preferences as well as different displays.

#### Dealing With Demand Swings WH Smith also is using information from the

CRM system to make the company's inventory distribution more flexible so it can accommodate realtime demand changes.

"When we see one store selling out of a particular item, we can shift inventory from a store where it isn't selling as well and take advantage of customer demand," says Dukes. To derive maximum benefit from CRM, corporate support is necessary from other basiness processes such as stocking and distribution he adds.

Training in-store personnel how to access the central data warehouse and generate relevant reports on inventory items took place prior to the crush of the 2001 holiday shopping season.

"Maing the CRM system is a still in itself," anys Stewart. The more Poliseare annager will find the tool easy to use, whereas the pre-PC generation may view it as a test to learn that takes up valuable time which could possibly be better spent elsewhere." The CRM system was put together in a short amount of time, with a prototype in August 2001 and a pilot in September. Followed by the October rollout. Dukes would have preferred more time to "get the consistence education across to a larger names."

ber of stores," but even be was distracted during December. During the beight of the holidsy season, Dukes was in the stores unpacking boxes and stocking shelves.

"It gives me greater credibility to be working with

"It gives me greater credibility to be working with the people who use the CRM system and a better understanding of what they need," be says. 9





# Schwab Sees CRM Payoff



WHO IS HE?
Robert Seidman
is senior vice
president of the
integrated client
experience group

at CRM pioneer The Charles Schwab Corp.

While other companies have Q&A tried and failed to wring competitive advantage from their customer relationship management (CRM) systems. The Charles Schwab Corn, keeps sourceing out value. The San Francisco-based financial services firm was an early adopter of CRM in the 1990s. Despite o 25% decrease in operating revenue and a 52% drop in operating income last year, Schwab is continuing to invest in tools that rive customers a more integrated. personalized experience, whether they visit o Schwab branch, make o phone call or visit Schwab.com. Robert Seidman, senior vice president of the integrated client experience group of Schwab, spoke with freelance writer

Rebert L. Scholor about the past, present and future of CRM at the company.

What doos "Integrated effent experience" mean? Through the '90s and the first part of 2000, we ... had a lot of things happening in the beanches, a lot of things happening in the call center and a lot of things happening on the Web. Now we're very much focused on bringing all those experrences together so that ... whereery you deal with Schwab, you're dealing with the same Schwah

is this integration tied to specific financial goals? We're developing the capability to provide different customers ... information tailored to them based on what their needs are.

We know that [improved] experience will [lead to] things like incremental revenue. In terms of cost-cutting, we developed on Schwab.com a natural-

Innguage search tool (from it Phrase Technologies Inc. in Cambridge, Mass., I that also has a lot of stockscreening capabilities. Based on usage of the search tool, which reduced calls and e-mail volumes, we're saving about \$125,000 per mouth. The payback period was probably less than a year.

hereofers are appelled by the down marlest and the Erren colleges. How has that changed your CRM and Web strainging? It only makes our need to do CRM more important. We still have just as many people visiting the Web site; they're just not trading. They're consing there for advice [about] what kind of planning

#### The Charles Schwab Corp.

BUSINESS: World's largest discount stock brokesige and the No. Toreline trader in the U.S. Traders can access Schwald's services via Helephon, wheless device and the Internet. The tim is No. 260 in the Fortune SO0 and No. 15 or Fortune's last of most-admined companies. ACTIVE CUENT ACCOUNTS. 7.6 million

ASSETS: \$846 billion SALES (2001): \$4.3 billion

NET INCONE (2001): \$159 milion EMPLOYEES: 19,600 they should do. Even though the trading frenzy sort of absted, the need to provide a great client experience is [stronger] than ever. We are piloting a variety of fee-based services (in addition to the existing nonbrokerase business)

Yea've using Yedies inc., an application service provider in Redwood City, Calif., for account aggregation services. How will that work? A customer enters a variety of account information, and I Yodies! goes and scrapes the Web sites they subscribe to, pulls in all the data and

information, and I Vodileel goes and scrapes the Web sites they subscribe to, pulls in all the data and aggregates it on the page. (In April, Schwab plans to offer the aggregadent advisers who sell its financial into services to the 6,000 independent advisers who sell its financial into services to the 6,000 independent advisers who sell its financial into services to to fortier into immediate plans to foffer i pomething like this with Schwab.com. We would never, ever, set something we would never, ever, set something our customers' data.

Inderstanding customers is an Important part of your CRM strategy. How will you do that? By having a good database, being able to collect information from (various applications), filter it and query against that data.

Oren teday's occuency, how are you feeding that integration infrastructure? Even in a down market, we're still investing heavily in both technology and integration. It wasn't a fun year, but we're not baskrupt. We still invest in things that are critical to the business.

How personalized is the eastenner's Web especience? Right now, the site is somewhat personalized and highly customizable. You can select what information you want on certain pages or (change) where it shows up on the page.

What Inseam would you offer other companies? We very early on identified. CRM as a big initiative for us. The common of the common of the common of the conversible part and accountability is important, because you could go yourself found up where ... we could have had a CRM crar for each channel and then have to try to aggregate that. Not [having a separate CRM chief for each channel] was a

good thing. 9

Scheier is o freelance writer in Boylston, Mass.

# STORAGE



# NETWORKING





# Success Begins With Girding for Complexity

TECH CHECK

DAYIO GADRA planned for the day when customer relationship management (CRM) analytics would arrive at his \$5.2 billion office products company. So when the multimillion-dollar IT overshaul

would arrive at his \$5.2 billion office products company. So when the multimillion-dollar IT overhaul known as Project E-Roo was given the green light last year, he was ready. Back in 1997, Gadra, CIO at Ilso Office Solutions Inc. in Malvern. Pa. hired developers from Infores.

Technologies Itd. in Sungalore, India, to build an Oracle data warehouse to standardize, migrate and store key data from the "literally basadreds of companies" Boo was zequiring, be says. Having established standards, policies and processes for migrating external data sources has shaved up to 30% off the development time required to interante analytic tools from Oracle Coms's

Oracle Ili suite.
Gadea says he learned that if you adopt
CRM analytics, you will confront application and data integration problems as well

as the challenge of designing business logic into the analytical tools that operate on the data. He argues that componies that venture lane CRM analytics without having their data integration and management strategies in order are "in for trouble-Gadin is particularly emphasic about making certain that enterprise resource planning (PRF) systems are working properly before attempting to use the data working properly before attempting to use the data print magnifying glass of an ERF problems. The says, Data integration proceed the list of steps taken by

Data integration topped the list of steps taken by the Teass Balaction Agroot as it wentured into CRM analytics. The Austin-based agency, which hands out more than 549 billion to primary and secondary schools in the state, began using analytic tools from Pleasanton, Call-based People-Soft Inc. in the fall to report more than 160 measurements about goals on everything from students' grade-leve about goals on everything from students' grade-leve reading rates to ethnic-group dropout rates.

Dan Arrigona, director of budget, strategy and royalize at the Texas Education Agency, says that before it ran its first report, the agency had to deal with data coming from different users, leasey student

data, financial sources and other multiple sources.'
Joyce Mlakar Smith, vice president of customer research at Columbus, Ohio-based Huntington
Bancchares Inc., has been using analytics tools from
Wankesha, Wis-based Nucléige Systems LLC since
1996. Huntington uses the software to market services to consumers and small businesses.

For example, the tool has helped the \$29 billion-inassets regional bank identify deposit account holders who have home loans at other institutions, enabling the bank to compete for that business.

After more than five years, the integration work still hasn't ended. Smith says she is always combining external demographic data sources with her in-house data. And she would like to integrate other data from the hand's branches.

Building in Business Logic
Whether IT chooses a best-of-breed
product or one that's part of an integrated suite. IT managers still face the

thorny problem of business logic.

"On the analytics side, the biggest source of failure has been failing on integrating the business logic into the tools," concludes Gareth Herschel, an analyst at Gartner Inc. in Stamford, Coan. "One out of two large-scale CRM efforts doesn't deliver what users

expected. Just charting sales order workflow procedures can be daunting, be says.

And that's scratching the surface. Gadra says. "To e-enable our business processes, we have had to re-

think everything we do from transaction processing to working with customers, employees and vendors.

Online Exclusive

How do you studyes the yolds of your CRM of

# Field Report: CRM Analytics

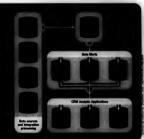
Maring an integration read map in the heat way to marigate through the deployment torsist of CRM analytics. With failure rates of advanct SONs for implementations of CRM applications and CRM analytic projects, it manus Bindy that the integration map in the

pophosis of using CRM analytics is identify areas for recoverposition, note-writing, antimore retards and other functions noted will have now companion to invest in CRM analytics. But the hampurdon other required the hampurdon other required to also this punisher could not 10 thms the

colours, my cases conjusts.
Citif gaulgite relitares leads on an most legacy data as it can access, which proceed that religation and integrity problems. Only format and middlesses colouries for which as is a rigarism methodology for soding instance logic color than the colouries and the color of the colors.

By Mark Hall





# **Analyze Your Staff**

COMPANY WORKERS often have CASESTUDY comprehensive and insightful data at their fingertips about the customers who call for sales or service. But ment doesn't always have information

about how those front-line employees are handline those phone sessions. Soberion Corp., a \$3.7 billion recruitment

and outsourcing company in Fort Lauderdale, Fla., had just that problem. "We had lots of tools about customers," says Tom Sultenfuss, a "We wanted a tool that

they were doing."

The company bought Envolve Performance Manager from Performix Technologies Ltd. in Burlington, Mass. The product delivers a realtime score card on each employee's call, measuring hard statistics like the duration of the conversation or "softer" quality issues that managers grade from recordings. Workers can see their performance over time in different

skill areas. Sultenfuse attributes Spherion's 12% gain in productivity to Performix's software. "There's no magic," he says. "People get the informa-

tion and they adjust them selves to perform better."

## Integrated Suites Vs. Best of Breed

ractive."

It is a supported to the nature of the named of the named of the of CRM analytic software in e-mail to call reports written on person did assistants, is too diverse and unstrue of to be managed in an insegnated way to the call of the c

XML for data presentation or Open Data base Connectivity for database-to-datab

# **Challenge**

# Success Begins With Girding for Complexity

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Data integration topped the list of steps taken by the Texas Education Agency as it wentured into CRM analytics. The Austin-based agency, which hands out more than \$14 billion to primary and secondary schools in the state, began using analytic tools from Pleasanton, Calif.-based PeopleSoft Inc in the fall to report more than 160 measurements about roals on everything from students' grade-level reading rates to other-aroun deposal rates Dan Arrigona, director of budget, strategy and rovalties at the Texas Education Agency, says that before it run its first report, the avency had to deal with

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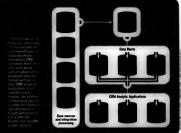
# Field Report:

# CRM Analytics

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**By Mark Hall** 





# Analyze Your Staff

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selves to perform better"

Challenge

# Integrated Suites Vs. Best of Breed

The inherent data integration problem makes

to use best-of-breed CRM analytic products or ones integrated within application suites knotter to answer. For David Gadra, ClO at Boxo Office Solutions, who was already running an Oracle Corp, data warehouse, adopting the analytics in Oracle lli "was very attractive."

Other users argue that the nature of the data needed to feed CRM analytic software, from e-mail to call reports written on personal digital assistants, is too diverse and unstructured to be managed in an integrated way.

"Best of-breed areas will do best," says Tom

Sultenfus, vice president of operations and customer development at Spherion Corp. "There's just not much of a convergence of data sources, which means a tremendous amount of integration work still has to be done."

sources, which means a tremendous amount of integration work still has to be done." Going with vendors of best-of-breed applications has risks in a technology segment that's consolidating, but analysts and users agree that IT can minimize those risks by:

- Defining standard data formats, such as XML for data presentation or Open Database Connectivity for database-to-database exchanges.
- Ensuring data integrity through proven and published processes.
- Establishing data migration processes, such as storing procedures for graphical data.
- as storing procedures for graphical data.

  Choosing CRM analytics tools that support
  Web browser access.

Integrated Tools

Oracle packages its business intelligence products with Oracle E-Business Suite. It offers impressive integration with Oracle applications.

PeopleSoft Inc. in Pleasanton, Calif., has

been in the analytics game since 1977. It targets vertical nurheets for 'cross-chain analysis.' Sichel Systems face, to direing tacks financial, manufacturing, human resources and other applications throwever, the San Mateo-Calif-based company's want number of integrated vertical market offerings make it the part closest thins to an interacted opervider.

**Best-of-Breed Products** 

Dotens of small companies offer tools for a wide range of niches (for a listing, see www.compdaw.wolf.com); 720002, Goy Crease, an analyst at Aberdeen Group Inc. In Boston, says that with so many business models in so many industries, specialized CRM analysis clost will always be necessary Many are compatible with the integrated enterprise application staties.

# **I-Star** ayers

# CRM project teams must have a stellar mix of technical chops and business savvy. By Steve Ulfelder

ers are finding that to maximize ir often costly customer relanship management (CRM) in-streents, they must handpick team members who possess not only top technology skills but an sive set of analytic and soft

skills to boot At Hub Group Distribution Services, a subsidiary of Hub Group Inc., a transportation management

firm in Arlington Heights, Ill., assembling a knowledgeable CRM team was critical. The company last year decided to move from Pivotal Corp.'s CRM software to PeopleSoft Inc.'s PeopleSoft 8.0 CRM. The primary deciding factor, says CIO Gint Dareis, was that Hub Group was already running PeopleSoft Financials 2.5. When it came time to expand the company's CRM system to the call center and field service, the promise of easy integration with Finan-

cials 7.5 swaved Hub Group toward PeopleSoft's sales and marketing CRM modules "We basically relied on PeopleSoft's

consulting group to do the develo ment " says Darris And with an IT staff of 17, Hub Group was lucky: Not only were several staffers familiar with PeopleSoft Financials, which eased in-

tegration of the CRM tools, but an internal power user who was also familise with PeopleSoft served as a de facto business-side project manager.

Such cooperation is critical, experts say. Users and analysts strongly advocate basing at least two project manseers - one from IT and one from the business side — to effectively lead a CRM periors "You need a combination of intuitive and (idea-generating) abilities," says Frank Instari, CEO of Wheelhouse Corp., a Burlingto Mass, based CRM consulting firm

These project managers must crack the whin to meet milestones. On the IT side, they must be adept dotted-line managers, since most of the people on the team - including the businessside project manager, consultants, systems integrators, users and others won't be direct reports. For that reason, IT project managers must be patient and focus on project goals while jumping through bureaucratic hoops, ner Inc in Stumford Conn

The stakes are high. According to a recent report from Deloitte Consulting in New York, CRM projects can cost \$10,000 to \$50,000 per seat, depending nn their complexity and the number of users. Services expenses, including those for internal IT staff, as well as for systems integration and vendor consulting make up 35% of the cost. according to Gartner. And that number is climbing, says Eisenfeld, who adds that she has seen services expenses as high as 48% of the total project cost.

#### **Business Choos**

Beyond familiarity with the software, the most important skills for CRM staffers are two attributes that have lone been in demand among techpologists: business knowledge and the

ability to communicate with users. The growth of CRM underscores the peed for technologists who grasp the broader business picture. "At some point in any project, you're point to want the best code jockeys you can pet." Eisenfeld says, "But you want those code inckeys to understand the business too. If they're just following specs without thinking, they're not adding value to the project

For a decade now, CIOs and recruiters have been clamoring for IT workers to bolster their busin knowledge, but that demand takes on new preency with CRM because it's externally focused by nature. On inter nal projects, when push comes to shove, end users can be compelled to use a less-than-perfect application

### Staff Check

ISS SKILLS. Pure IT typ suble greeping the big CR

With CRM, the stakes are higher When you scorw up, customers say, Tm not going to put up with this --I'm going elsewhere," Eisenfeld says Andrew Benedetti, branch manag ment firm RHI Consulting Inc., notes that communication skills and business knowledge aften go hand in hand Too often, businesspeople and technol ogists "speak two different languages and need a translator. That translator needs good communication skills and an IT background," he says.

"They don't necessarily need to be able to develop a program, but (they rust be able in) read and understand it." save Benedetti, "And they need the business sovey. They need to be able to tell the business folks when something they ask for is not feasible."

While it isn't easy to find top-notch technologists with these skills and the knowledge of specialized CRM software tools, there's some good news for hiring managers: Experts say that in today's job market, there are so many ap plicants for CRM positions that employers can afford to be selective.

UMfelder is a freelance writer in Southboro, Mass. Contact him at sulfelder@yahoo.com.





THE CONSTRUCTO WEST ON A SEASON FOR A DATABASE THAT RUNS ON LINUX: UNIX AND WINDOWS 2000, THEY DISCOVERS

# **DB2** OUTPERFORMS ORACLE

CUSTOMERS KNOW IT, PARTHERS KNOW IT, BENCHMARKS PROVE IT



IT'S A DIFFERENT KIND or WORLD. YOU NEED A DIFFERENT KIND OF SOFTWARE Keeping customer records confidential may be more than a legal compliance issue it could enhance the bottom line, too. By Patrick Thibodeau

PIVACY IS AN IMPORTANT PART OF ROYAL Bank Financial Group's customer relationship management (CRM) system. Employees explain Web "cookies" to customers, the bank offers cell phones with special encryption chips for wireless transactions, and it has a pilot program through which it gives away firewalls and other security products to customers. That's right, for free. So where's the profit in that?

For Peter Cullen, chief privacy officer at Torontobased Royal Bank, there's profit in privacy. 'It is one of the key drivers of a customer's level of commitment and has a significant contribution to overall demand,"

As more countries adopt stricter privacy laws. companies have to adapt their CRM systems to comnly But Royal Bank clearly sees privacy as more than a legal issue; it's asso a pathway to a customer's loyalty and spending.

We are very much in a relationship business. Cullen says. Privacy "plays a measurable part in how customers decide [to] purchase products and services from us. It brings us more share of the customer's wallet."

Many companies are reluctant to offer customers more privacy choices, such as opt-in features that require getting customer permission to collect or transfer personal information. Businesses fear they'll lose their ability to leverage customer data and share such information with affiliates. Dennis Behrman, an analyst at Meridien Research

Inc. in Newton, Mass., sums up the prevailing attirude: "You won't lose customers if you offer privacy options, but you may lose access to your ability to But before companies can ask how privacy fits into a CRM strategy they need systems that can handle

privacy compliance. New domestic and international laws are arriving rapidly. Australia, which enacted its new privacy law in December, is a good example. A section in Australia's law requires companies to stroy customer data or make it anonymous once it's no longer needed. That includes backup files, says Andrew Handelsmann, an attorney at Deacons.

says Andrew Francesmann, an autority at Deasons at law firm in Sydney. Compliance will involve more than simple deletion to ensure that files are really erased from drives, he says. Complying with laws of this type, as well as inte

grating privacy into a CRM strategy, requires changes



# KNOWLEDGE CENTERCRM

in IT systems and management. "It's keeping the system smaller, and it's more controlled," says Greta Osrrovitz, IT director at Cadwalader, Wickersham & Taft, an international law firm in New York. "We don't have these huge, huge databases that just have a life of their own and no one knows what's in it."

Tiebter control is important to CRM strategies and legal compliance, Ostrovitz says. For instance, when her firm wants to send online and print mailings to clients in England, it must first get client permission for the mailings, according to U.K. privacy regulations. "In building a system, the key is maintaining an audit trail so you know exactly when something gets entered, who entered it, when was something mailed,

what exactly got mailed," says Ostrovitz. The Gramm-Leach-Bliley Financial Services Moderwirerion Act, which took effect in the U.S. July I. was one of the reasons Cleveland-based KeyBank revamoed its massive customer databases.

KeyBank pulled about 50 million customer records beld by various business units and distilled them into a single database of 11 million records "We wanted a customer-centric approach, where the

customer just came to us once - at any entry point in the company - and we could then identify the rest of their relationships in the organization," says Angela Maynard, chief privacy officer at the Fortune 500 bank In going through the 50 million customer records, KeyBank also "cleaned" the data held by different business units to improve accuracy. It did this in part

by matching the data against 200 million credit records maintained by Experian Inc. in Orange, Calif. From a CRM perspective, this single view of the database means that if a customer asks to be excluded from certain forms of information sharing, as allowed

under the Gramm-Leach-Bliley law, this privacy request can be consistently applied across all business units, reducing the chance of a mistake, Maynard says.

"If you don't have all those [records] collected and managed together there's a risk you are going to miss a record or two," Maynard savs.

Although privacy issues present technical challenges to data management, a well-designed CRM system is much better suited to privacy cootrols than a hodgepodge of separate legacy systems, says Michael Beresik, national director of the privacy practice at New York-based PricewaterhouseCoopers.

#### Keening Data Sacred

Most affected by privacy law compliance is the health care industry, which, under the Health Insurance Portability and Accountability Act (HIPAA). must have strict access controls for records

Providence Health System, a Beaverton, Orc.based health care provider with about 780,000 members, is developing a system that limits access to medical records on a need-to-know basis. A financial analyst, for instance, would see only the customer data pertinent to his work, says Chris Apgar, Providence's data security and HIPAA compliance officer.

These changes, although not directed at customers, are ponetheless a form of CRM because cus tomers expect their health care records to be confidential. "One of the big selling points is how well you are taking care of my health data - that's one of those things that's sacred," Appar says.

But many industries are worried about the unsettled nature of privacy laws. In addition to various privacy initiatives in Congress, states are free to adopt their own privacy standards. Some, such as California, may require a customer opt-in policy for financial record sharing, instead of the federal optout approach, which requires consumers to take ac-

tion if they want to stop record sharing. "We are holding our breath that [lawmakers] don't change direction, and we will have to build some thing totally new," says Maynard.

Internationally, U.S. firms that transfer customer and personnel data out of Europe have to comply with European privacy laws. These laws allow customers access to data that's held about them, and let them determine how that information is used. Some U.S. firms, such as consumer products giant Procter & Gambie Co. in Cincinnati, have adopted as

their global business rule the European privacy standard, which is gradually being followed by other countries. This approach creates uniformity and reduces potential compliance costs, the company says. Analysts say e-commerce companies can lose business if consumers doo't trust that personal informa-

tion will be carefully guarded. Forrester Research Inc. in Cambridge, Mass., estimates that total online spending last year of \$476 billion would have been \$15 billion higher had it not been for consumer privacy concerns. Companies can increase sales by mak-ing their privacy policies clearer and easily underndable and accessible to cons mers, says Christo-

pher Kelly, a Forrester analyst. On the other hand, active online consumers don't seem to pay much attention to privacy policies, ac-cording to data compiled by WebSideStory Inc., a company that analyzes Web site data. In its analysis

Tips for Managing Privacy

s Customer data has to be "clean If customer records don't match across bus ness units, preson preferences may not be consistently applied. This could upset a cast tomer who thought he opted out and learned retherwise, and it could also greate legal risk.

 Smaller, tighter detabases are best End users say big, biosted databases under of money moneyment. · Enforcement risk is rising. The Fede

al Trade Commission (FTC) is increasing to enforcement staff, and most experts say European authorities are gearing up for some high-profile privacy law enforcement actions.

m Remember: There's no legal difference between off-line and enline do The FTC is regions that clear

now international laws.

a Audit trails are important. Proving compliance with the less means having

Wething is certain. Congress is considering new privacy laws as well as changes to old ones. There is no lotup in the passage of

- Patrick Thibodeau

of page views, "the privacy page rurely makes the s 100" of anyone's site, says Randy Broberg, chief privacy officer at the San Diego-based com "The opinion polls that say that everybody in

America is frightened to death about privacy over state the reality of people who are actually surfing the Internet," Broberg says. But based on its internal studies, Royal Bank is

convinced that privacy keeps customers coming back, says Cullen. The secret to effective CRM is delivering value to the customer, he says. If a customer starts turning off the infor flow, does that indicate that he's concerned about his

privacy, "or does it say that we haven't generated enough value to them?" asks Callen. "We have a high level of trust with our customers right now. It's ours to lose," he says, "But there are huge benefits to doing things that continue to

reinforce that trust." Online Resources

NICHOLAS PETRELEY

# **Lessons in CRM**

USTOMER RELATIONSHIP MANAGEMENT and security are inseparable. That is, unless you're Pacific Bell or MCI. To illustrate allow me to tell you a little story. It all started when I noticed that someone was using my MCI calling card to make calls to Germany. I canceled the calling card and, just to be on the safe side, switched my long-distance carrier to Sprint.

About a week or so after I received my Sprint materials, I not a call from MCL I expected it to be a nitch to come back, but it wasn't. The MCI customer representative was checking to see if the recent calling card calls from Colorado to Germany were legitimate. The woman with the friend in Germany had appar ently switched my long-distance carrier back to

1 canceled the MCI MCI account and then created a new one without the international plan and passwordnentected it. As an extra safety peasure, I had my local phone company, Pacific Bell, put a ary Interexchange Carrier (PIC) freeze on my phone number to stop anyone from changing long-distance carriers. I password-protected that account too. The next time I called Pacif ie Bell. I couldn't talk to customer service until I agreed to pay on my delinquent account. Delingment? Well, come to think of it, I haven't received any statements in the past few months. I managed to get a

human on the line and asked if there was a way I could pay off my bill via the Web. She said that if I created a Web account. I would stop receiving statements in the mail. Suddenly it became clear. Someone had already created a Web account for my number, which is why I

wasn't receiving my state Pacific Bell's system won't let me create a new Web account for the same phone

number which is the way it should work. The Pacific Bell representative couldn't change the Web user name or pass. word or cancel the Web account, which isn't the way it should work. She asked anothon demonstrate annual the Web account and said a spe-

#### cialist would call me back. Still Locked Out

over a week since I made that call. The bogus Web account is still active. No calls from specialists. No responses to e-mails. I'm still locked out of the Web account This piqued my curiosity about how MCI handles Web accounts, MCI requires your account number or your calling card personal identifica-

tion number (PIN) to create

one. I hadn't received an MCI hill with my account number vet, so I entered my calling card PIN It rejected the stternot. My MCI account had been compromised again. I called MCI to set my account number. The represen-

tative gave it to me without askine for my account password. This fellow also offered to remove the PIC freeze. It's really easy, he said. All he has to do is call an 800 number. No wonder my account was so easily compromised. (MCI handled my next call properly. so it depends on the represen-

I crested an MCI Web account. (Unlike with Pacific Bell, you can cre-As I write this it's been well ate as many MCI Web accounts as you like for the same phone num ber.) I could see the calling card PINs on all five new calling card And although I could add new se vices, the Web software offered no options to re-

tation 1

move the cards the international calling plan or any other

services

So what have we learned? Lesson & Introvate your CRM solutions. At the very least, synchronize the security data Pacific Rell customer service uses your phone numher to find your account. The corresponding Web account should therefore be based on the same phone number, not an arbitrary user name. Both should require the same nass-

Lesson 2: Enforce security policies in software. The CRM software that customer service reconsentatives use should prevent the representarives from making changes to a customer's account until they've asked for and entered the customer's password. Lesson 3: Avoid blatant stupidity. If you haven't al-

ready created a Pacific Bell Internet account, anyone can create one for you - and lock you out of it - with little more than your

phone number. MCI requires an account number but if you want one, just glance at opened MCI bill Their account number will be visible right through the ad-

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Michael Patrick, director of workforce recruitment

and planning, said the company will be hiring interestive deposition, systems engineers, software developers, but especially those with superants of the company of the com

Paricks said the nature of the company's work is highly agoifficant. These are jobs that can play to your skills, but also where you can make a consideration. The play of the play of the play of the amount of devention that the play of the play of the which you can apply your skill lest. The deventy of our customers is also an attractive proposition federal, local and state government, face federal, local and state government, and And, there is fastility in research and development, a committee to school comments of with your comment

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planning and Web-based sys-

tems during the 1990s, said

Lacefield, and many are now

realizing that they never saw

At the time, he said, "it was

nothing to talk about tens of

millions of dollars of expense." The problem, said Bill Schi-

ano, an e-commerce professor at Bentley College in Waltham,

Mass, is that companies were

returns from them

#### Continued from page I

# Fnron

soberine effect on board across the country' said Dick Hudson, former CIO at House ton-based oil drilling company Global Marine Inc. and now president of Hudson & Associa ates, an executive IT-consultine firm in Katy Texas, "You can almost see a bunker mentality taking hold in the senior

Hudson said he has heard from CEOs who have been reviewing their risky IT ventures, such as application service provider spin-offs or extransous e-commerce services. to make sure they don't have any investments that will blow on in their face. If they find any such ventures he added. "they

will probably retrepch. It's a bottomless pit." Charlie Lacefield, who retired from his position as CIO at Midland, Mich-based Dow Corning Corn, three years ago. warned that although IT innovation is critical for componies to thrive in a global economy, those that stray too far from their core business strategies could see their plans backfire on them, as it did with Enron. "If IT is not the core competency of the organization, then why throw away the core competency? asked Lacefield. who now lives in North Carolina, "Why would you want to do that with so many IT com-

Hudson said he thinks Enron started with a good business strategy and that if it hadn't pushed the envelope, it could well have been a successful Fortune 1,000 firm, But its sights were set on the Fortune 10, so it got into markets such as broadband, which is a tough nut to crack even for the industry's leaders, he added. "Those good old boys to

panies out there ... that already have a running start on



IRON WAS INTERESTED in purming tough markets such as broadhand a stratom that cost the come

the big dogs," said Hudson. "They are a textbook case of erred and mismanagement." Enron officials couldn't be

#### reached for comment. The Shakeast

Many IT executives believe that Enron's bankruptcy was a case of poor timing and that the recession is the real culprit behind nationwide IT costcutting. Others see the trend as a natural shakeout following vears of technological over-

"What the '90s showed us was how much IT can do," said Charlie Feld, CEO of Irving, Texas-based IT management firm The Feld Group. "I think the next decade is going to be about businesses finding ways to harness all that creativity and use it, rather than chasing

it because it's there. As a CIO-for-hire at compo nies like Delta Air Lines Inc. in Atlanta and Frito-Lay Inc. in Plano, Texas, Feld's jobs have often been about simplifying IT infrastructures that grew complex because companies chased so many new opportunities that they lost focus. different sechnologies or busi-

\*Companies fall in love with ness plans, and suddenly they find their infrastructure's been built in stovenines," said Feld "IT should make life simpler." Companies poured cash into developing e-commerce IT strategies. "What they really needed was ... a business strategy with e-commerce at its center" he said

Another mistake companies made was pursuing complex business-to-business processes when they couldn't even interrate their internal data. added Mark Eyens, CIO at Tesoro Bernoleum Corn in San Antonio, Industrial-strength application integration tools that unlock legscy data and break down traditional IT silos are only now hitting the mar-

kee he said "Truth is, you can save more money improving internal nencesses than you can with any B2B project," Evans said. The Dow Chemical Co. is still investing in IT, said Snebal Desai, director of e-business at the Midland, Mich-based company, which owns half of Dow Corning, But Dow Chemical is focusing on longer-term structural changes to the way it

does business rather than run. suing new revenue streams. For instance, in 2000, when | winning in the end "9

Dow Chemical was looking for a hosting system to mana the workflow of its new how

ness development projects, it couldn't find a suitable product on the market, so it created its own. It then spun off a sepa rate company called iVenturi to develop and market the systesn, but it wound up putting it on for sale within six mooths. Dorothy Hawkins, vice pres ident of IT for the energy distribution group at NiSource companies today seem to be placing greater responsibility on the shoulders of IT departments to consolidate busin processes and standardize on

Companies are done with the pipe dream prospectuses of the 1990s, and they're back to the fundamentals: using IT to deliver ever-increasing quality to customers at ever ower costs, said Jim Prevo CIO at Waterbury, Vt.-based Green Mountain Coffee Inc. "I think the whole world went nots," he said. "But some how the truth has a way of

Striking a Balance Between the Bottom Line and Creativity

Anting tough questions about IT can be valuable, but it can also slife innovation if there's no room to take raiks. Self, IT leaders say there ow out the / word, which of that if all you do is build any en flocal revoc

= Don't look at the E at intermation erration said Roger Gray, CIO at I & Flactric Co. in San Fra

atracture," sad Charle Feld, CED of The Feld Group, Learn to

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FRANK HAVES/FRANKLY SPEAKING

# Girls Warm Up to IT

TATISTIC: 18% OF TEENAGE GIRLS online believe they could back into their schools' computers. That's according to a survey of more than 1,000 young women ages 13 to 18 conducted last summer and released last week by the Girl Scouts. Could these kids actually break into school com-

puters? Nobody knows - but they think they can. And 58% of them believe they know more about computers than

anyone else at home, including mom, dad - and their brothers. In other words, everything the worrywarts have been telling us about girls and their future in IT is wrong.

Those worrywarts say girls are uncomfortable with computers, unsure about their abili-ties with technology and generally not good

candidates to work in IT shops. They point to some statistics of their own. such as a survey by UCLA researchers of more then 250 000 students who entered 434 colleges in the fall of 2000. That survey found that freshman women were only half as likely as men to rate their computer skills as above average (23% vs. 46%) and less likely than men to frequent Internet chat rooms (17% for women, vs. 23% for

men) or use the Web in general (48% vs. 58%). They point to the steady decline in the percentage of undergraduate computer science degrees going to women - from 37% in 1984 to 20% in 1999, according to Tracy Camp, an associate professor at engineering university Col-

orado School of Mines And they point to the fact that only about 25% of the people in IT today are women.

Boys, they say, get booked on computers early with games - shoot 'em up, smash 'em up or chop 'em up. They graduate to wanting to build their own games, and that's their path into programming. Girls, who aren't much

interested in shooting, smashing and chopping, don't start computing until later - and never catch up in either motivation or enthusiasm. That's the theory, anybow, And if

the worrywarts are right, it really will require a concerted effort to overcome siris' resistance to computers. Even then, it might take gen-

erations for them to pull even. But if the statistics from the Girl Scout researchers are right, that has all changed in just a few years. These kids are swapperingly confident, and they're in front of a screen whenever they can be. Something is different - radically different — for the current crop of ternous viris.

That something appears to be instant message ing (IM). IM is turning into the kind of addictive application for girls that computer games have always been for boys. They've got to be online, Girls quoted in the Girl Scout researchers' survey say things like, "Being grounded from IM was the worst," and "I need the Internet." Two-thirds of them are online several times a

day, seven days a week. And IM shows signs of becoming a gateway addiction for these girls. Not just to chat room but to seif-built Web pages - complete with macho real-webbeads-code-their-own-HTML attitudes. And for some, after HTML comes lavaScript - and sometimes full-blown pro-

Does this mean that a few years from now we'll be awash in female programmers? Maybe. But what could be even more important is how today's IM-happy teenage girls think about

gramming languages.

computer technology. They see it mainly as a way to socialize. And it's a short step from socializing to doing business - which is what

corporate IT is all about these days Which means that girls who cut their teeth on IM and wrote-itthemselves Web pages start out a lot closer to what we do than how who play Grand Theft Auto So maybe we should stop worry-

ing about how to get girls enthusiastic about IT. If instant messaging really has solved that problem, we should be figuring out how soon we'll be able to put them to work.

work card. He loves it - for a day NETWORK ENGINEER old or so until the hattery ones. dearl Deliver obenit into a nove fish finally linds the source of interrettent problems. The cable er outliet to charge it? asks IT pilot fish. "No." says sales guy was cad and each was was impatiently. "It's weeless, why spliced together with electrical tage," fish reports, But tech who

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could be that long?

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